



**VOGAMAKINA INDUSTRIAL PLANTS Co. Ltd.**

[www.vogamachine.com](http://www.vogamachine.com)

## **Who we are ?**

*VOGAMAKINA Industrial Plants Co. Ltd was founded in 2017 after a long experience in the sector. Our company founders have over 20 years of experience in the sales, manufacturing, and commissioning of electrostatic powder coating systems and turn-key projects of liquid painting.*

*We are an engineering-based, teamwork-oriented company with the goal of providing our customers with highly efficient and low end-user cost solutions. We provide product-driven technical projects to customers in accordance with European standards.*

*We have already implemented our powder coating and liquid painting systems in 35 countries around the world. Today, VOGAMAKINA is working continuously in a more than 20 countries in Europe, the Middle East, Africa and South America and in the Turkish market, producing solutions for powder coating and liquid painting systems. Our export rate is 95% of our production.*

*Our company manufactures powder coating & liquid painting systems and components with its own VOGAMAKINA brand as well as with brands labels belonging to our business partners in the domestic market and abroad.*

*All of VOGAMAKINA products are CE certificated.*

*We provide a wide range of low-cost, high-quality replacement parts for the well-known brands powder coating equipments.*

*Customer satisfaction, high-quality production, warranty, and product efficiency are all goals we strive for.*

## **What sets us apart from the others?**

*We are devoted to our work;*

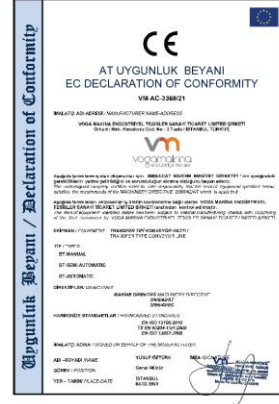
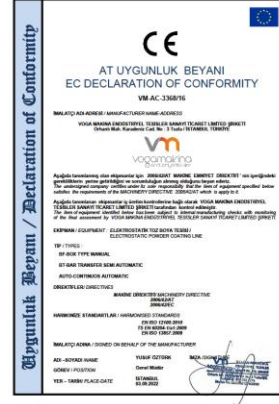
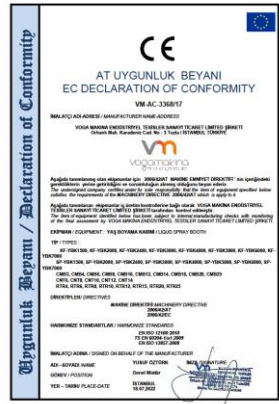
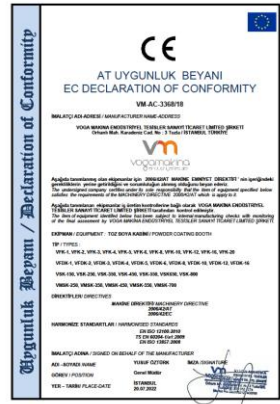
*We work in a disciplined and planned manner;*

*We are always looking for ways to improve our products;*

*We produce solutions.*

**VOGAMAKINA Team**

# OUR CERTIFICATES



## SOME OF OUR REFERENCES IN TURKEY AND ABROAD

## OUR PRODUCTS AND SOLUTIONS

1. COMPLETE POWDER COATING LINE SOLUTIONS
2. COMPLETE LIQUID PAINTING SYSTEM SOLUTIONS
3. PRE-TREATMENT SYSTEMS
4. POWDER COATING CURING OVENS
5. POWDER COATING BOOTHS
6. POWDER COATING EQUIPMENTS
7. OVERHEAD CONVEYOR SYSTEMS
8. WOOD EFFECT COATING OVENS FOR ALUMINUM PROFILES AND SHEETS
9. AGEING OVENS FOR ALIMINUM EXTRUSIONS
10. HEAT CLEANING OVENS
11. INDUSTRIAL INFRARED OVENS
12. HEAT TREATMENT OVENS
13. SHOT BLASTING SYSTEMS

## POWDER COATING LINES AND COATING SOLUTIONS

### POWDER COATING LINES AND SYSTEMS

Powder coating lines are analytically designed by our engineering department on a project basis, taking into account the daily/monthly quantities, geometries, raw materials, weights, etc. of the work pieces to be coated, and efficient coating solutions are offered with minimum operating costs.

Accordingly, manual, semi-automatic and fully automatic systems are designed on a project basis and offered by our sales department.

Our powder coating systems are CE certified and meet International Standards



• FULLY AUTOMATIC SYSTEMS



• BAR TRANSFER AUTOMATIC SYSTEMS



• SEMI-AUTOMATIC SYSTEMS



• MANUAL SYSTEMS

## POWDER COATING BOOTHS

### PLASTIC ANTI-STATIC POWDER COATING BOOTH

The powder coating booth is manufactured modularly from 100 mm thick antistatic plastic PVC or PP sheet panels and steel structure. Fast color change is provided with additional systems added to these powder coating booths.

Plastic paint booths work synchronously with the VM powder center and full control is provided with the PLC control system.

Efficiency is 97-98

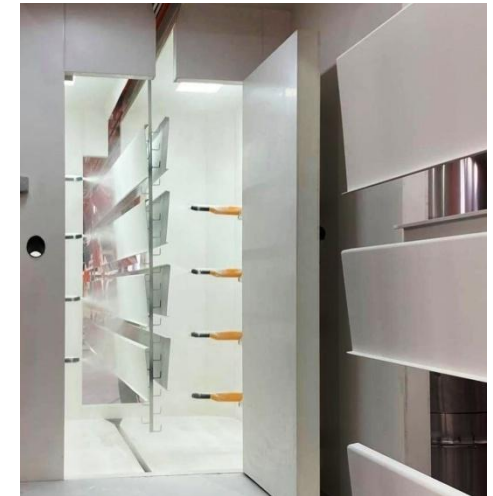


### VM POWDER CENTER

The VM powder center controls the powder coating booth and the entire powder coating system. It consists of an aspirated cabinet body, an ultrasonic sieve, a vibrating table for fresh powder coating and a powder feeding system to the powder guns.

The complete system is controlled by a PLC system algorithm. Operating and cleaning modes can be switched with a single touch on the LCD touch panel.

The powder center provides complete system cleaning in case of color change and provides transition to the other color in a short time.



## POWDER COATING BOOTHS

### MONO-CYCLONE TYPE POWDER COATING BOOTHS

Consists of powder booth, cyclone group and after-filter system. Fully controlled by PLC system, these booths provides 97-98% powder recycling efficiency and fast and easy color change.



### COMPACT CYCLONE TYPE POWDER COATING BOOTHS

Consists of powder booth, cyclone group and simpler after-filter system. This powder booth type is cost-efficient option for fast color change with lower efficiency than the mono-cyclone type booths.

Powder recycling efficiency is 80-85%.





## POWDER COATING BOOTHS

### CARTRIDGE FILTERED POWDER COATING BOOTHS

The powder booth is simple type and economic solution for continuous system powder coating lines. Applied powder coating is filtered by cartridge filters and powder recycling can be achieved. Color changing is taking time with these powder booth and it is suggested mainly for companies working with one color per day.



### WALL TYPE CARTRIDGE FILTERED POWDER COATING BOOTHS

This model is an economic solution for small workshops and manual systems.



## POWDER COATING CURING OVENS

### BOX TYPE OVENS

Box type ovens are for manual use with ground trolley. Powder coated work pieces are hung to the trolley and moved into the oven manually. Trolley movement can be achieved automatically by addition of ground moving mechanism to the system. Box ovens can be designed with single or 2-doors and combined to bar transfer conveyor systems. Electricity, liquid or gas fuel is used for heating the ovens.



### OVENS WITH OVERHEAD CONVEYOR LINE

The ovens are 2-doors box type, conveyorised system batch ovens with axial palette overhead conveyor working step-by-step. Powder coated work pieces are manually loaded to the conveyor at the loading station then moved into the oven as one batch and starts curing. At the same time loading station becomes empty and loading operation continues. Cooling and unloading station is at the exit side of the oven. Electricity, liquid or gas fuel is used for heating the ovens.



## POWDER COATING CURING OVENS

### TUNNEL TYPE OVENS

The ovens are conveyerised combined with automatic powder coating booths. Product inlet and outlets are opened according to the biggest work piece sizes.

Oven shape can be designed as a tunnel, U-shape or W-shape according to the project and the work shop sizes. Electricity, liquid or gas fuel is used for heating the ovens.

### CUSTOM DESIGN OVENS

The ovens are designed by our engineering department according to the work piece dimensions, daily product quantities, maximum oven temperature demand and such parameters.



## POWDER COATING SYSTEM AND EQUIPMENTS

### MANUAL FAST COLOR CHANGE TYPE POWDER COATING EQUIPMENT VM VG1-VN

Simple and efficient designed for powder coating applications with frequently color change within the day. Powder suction is directly from powder coating box that maintains easily fast color change.

The equipment is movable, the body consists of a console and a chassis with a vibration table where powder box can be placed. Powder suction is achieved using a conductive pipe that maintains perfect fluidization inside the powder box and a powder injector above it.

Powder coating equipment is CE certificated and conforms to the European Norms.



### POWDER COATING RECIPROCATOR

The construction and performance are designed to high continual load everyday operational conditions. Perfect coating is achieved by PLC control system and touch screen panel with easy adjustment of the stroke and reciprocating speed in order to meet the production demand.

## LIQUID PAINTING SYSTEMS

Our company offers solutions for liquid painting systems, designed according to the demand of the surface quality as well as the workpiece quantities and sizes, type of painting application etc. with a combination of handling system, flash-off tunnel and paint curing oven.

The projects are carefully studied based on these parameters in order to achieve the most efficient painting system.



• CLEAN ROOM SYSTEMS



• RETRACTABLE SPRAY BOOTHS



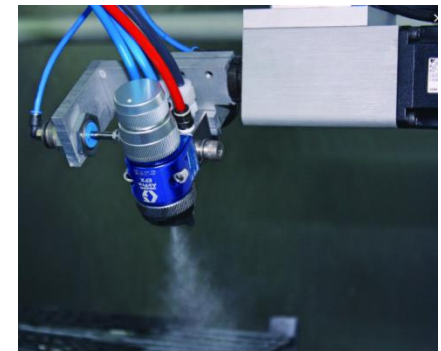
• TELESCOPIC SPRAY BOOTHS



• DRY FILTERED PAINT EXTRACTION WALLS



• CONTAINER SPRAYBOOTHS



• AUTOMATIC PAINTING SYSTEMS

## LIQUID PAINTING SYSTEMS



### RETRACTABLE SPRAY BOOTH

The spraybooth is designed for manual painting application, with side draft suction ventilation and dry eco filtration system. It saves space in the workshop at folded position during it is not used. The spray booth is environmentally friendly.

It can be used for sanding or grinding purpose and for automobile painting as well.

Designed for indoor or outdoor use, movement of retractable part can be designed to work on industrial wheels or on a ground rail.

### COMBINED SPRAY BOOTHS AND DUST-FREE LIQUID SPRAYING SYSTEMS

Complete systems including fresh air preparation unit, dust filtration from the ceiling, paint extraction filtering system and with a combination with paint curing oven. The system is customized and designed for paint application according to the work piece quantities, sizes and raw material such as plastic, metal or wooden products.

The system is environmentally friendly.



## LIQUID PAINTING SYSTEMS

### TELESCOPIC LIQUID SPRAY BOOTH

Telescopic spray booths are the best solution for painting big sizes and heavy work pieces.

The spray booth body becomes of wall blocks that makes the body extendable while moving.

Motion is automatic, provided by a motor reducer system.



### CONTAINER TYPE SPRAY BOOTHS

Becomes of a 20 feet container body, a compact system that eliminates the space usage at the workshop.

It is movable and have all accesories on it such as paint extraction wall with ventilation system at one side, ex-proof illumination, fresh air inlet plenum and a door with panic bar.



## PRE-TREATMENT SYSTEMS



### AUTOMATIC PRE-TREATMENT LINES

It is the best option for automated and continuous powder coating systems where the product quantity. Pre-treatment is achieved during the products are passing through the active zones of the surface pretreatment tunnel.

Chemical process is selected as phosphating or nano-technological process according to the raw material of the work pieces.

Consists of a tunnel and stage zones according to the chemical process, each stage have its own chemical tank, a circulation pump system and spraying active zone.

Surface preparation efficiency and quality of the work pieces in this system is very high.





## PRE-TREATMENT SYSTEMS



### DIP PRE-TREATMENT LINES

Dip pre-treatment systems are suggested for manual and semi-automatic system use, where work piece quantities are lower. At the same time, this method provides an advantage for cleaning products such as tubes and profiles in order to decrease their interior surfaces.

The system consists of a suitable number of immersion tanks according to the chemical process, monorail winch and a basket. The pre-treatment operation is manual by dipping the basket into the tanks. At the end of the process products are dried in drying oven.

In this method, mostly iron and zinc phosphate and aluminium chromate processes are applied. It is also suitable for nano technological processes.



## OVERHEAD CONVEYOR SYSTEMS

### CARDAN CHAIN TYPE OVERHEAD CONVEYORS

Movement of cardan type conveyors on X, Y and Z axes provides advantages over other conveyor types.

The conveyor rail is manufactured from black sheet metal and electrostatic powder coated externally. Rails are mounted to each other by means of flanges with bolt nut connection. The chain material is made of steel sheet and heat treated, so problems such as wearing and elongation are minimized. Bearings are high temperature C3 backlash bearings.

The drive station provides silent and vibration free movement.

The torque limiter on the drive station prevents the drive motor from being damaged by the conveyor breaking the circuit in the event of jamming. Lubrication is done automatically controlled from the electrical panel. The system is speed controlled.

Cardan conveyors are manufactured as 3 types with different load capacity per a hanger such as 38kg, 80kg and 120kg,



Conveyor drive unit



Automatic 4-Points Lubrication Unit



Conveyor Track



Cardan Conveyor Chain

## OVERHEAD CONVEYOR SYSTEMS

### I-BEAM WEBB TYPE OVERHEAD CONVEYORS

The conveyor chain is made of high carbon steel by hot forging method and consists of 3 parts - side link, middle link and a pin. Since chain links are connected to each other without rivets, chain assembly and dismantling is very easy.

Conveyor trolleys consist of 2 symmetrical bodies made of hot forged high carbon steel, between which carrier plates are attached and the bearings are mounted on them. Bearings are special type conveyor bearings that can operate at 200°C. Trolley bearings are lubricated by means of grease fittings on the bodies.

The trolleys mounted on the chain moved by the drive unit, work on the principle of carrying the suspended loads by moving on the I-beam rail. The conveyor rail is fixed by steel supports fixed to the ground. Due to the chain structure, the webb conveyor is suitable for horizontal movements on the X and Z axes as well as vertical movements on the Y axis.

Webb conveyors are manufactured as 3" and 4" types and trolley load capacity is 120 kg, 250kg and 450kg per a hanger.



Caterpillar Drive Unit



Pulley Type Drive Unit



Pulley Type Curves



Track, Trolley and Chain

## OVERHEAD CONVEYOR SYSTEMS



### BAR TRANSFER TYPE CONVEYOR LINES

The conveyor systems consists of a combination of conveyor tracks, without a conveyor chain, Work pieces are loaded to bars in these conveyor systems and movement is achieved by pulling or pushing the bars manually by operators. Fully automatic coating can be achieved by addition of an axial chain conveyor over the powder coating booth. C3 backlash bearings used at the trolleys provides smooth motion at high temperature inside the oven.

The benefit of the transfer type conveyors is that can be installed to workshops with limited space. Transfer system can be manually or fully automatic PLC controlled according to the customer demand.

The system is efficient due to products are loaded once to the conveyor and unloaded after curing operation finishes.

### POWER & FREE CONVEYOR LINES

It works as double monorail. Lower monorail is used for moving the load hangers, the chain moves continuously on the upper monorail.

The difference of power&free systems from monorail conveyor systems is that this is suitable for complex production process and is designed as full automation.



## WOOD IMMITATION OVENS FOR ALUMINUM PROFILES AND SHEETS



### SUBLIMATION TRANSFER OVEN

It is specially designed for the transfer process that works with sublimation principle to give wood, marble or special effects to the outer surface of the work pieces. Work pieces are mostly aluminum profiles, aluminum sheets or steel doors.

The pattern on the polyester film is transferred to the base powder coated surface at the gelling temperature point.

The system consists of a carrier with special vacuum heads, a vacuum pump system, a transfer oven and PLC controlled electrical panel.



## HEAT CLEANING OVENS



### HEAT CLEANING OVENS

Heat cleaning ovens operates on the controlled air principle. Combustion and temperature are controlled by restricting air flow to the load.

The fire is smothered by limiting the oxygen, necessary for the combustion. Controlled air ovens are normally equipped with PLC system showing oven process temperature. When the preset temperature is reached air supply is automatically restricted. When the temperature drops, burner comes back and the air supply is automatically opened.



All heat cleaning ovens includes an integral thermal oxidizing after-burner with its own temperature controller. This is sized to supply air to the process chambers exit gasses and brings gasses to 800-1100°C or to higher temperature for oxidizing the fumes, smoke and odors being discharged from the load.

Most paints and volatiles ignites between 260-600°C causing rapid temperature raise to the controller set point. This automatically shuts down the process chamber burner and air supply. As oxygen is consumed, the flame is extinguished and paint or coating cleaning conditions are established.

The ovens are CE certificated and conforms to the European Norms.

## INFRARED OVENS

### INDUSTRIAL INFRARED OVENS

Infrared ovens are mostly used for curing of painted or powder coated work pieces in the continuous coating systems. IR system ovens can be used as pre-heating tunnel ovens as well, added in the front of the conventional ovens as an independent paint or powder coating curing ovens.

Energy source is available as 2 types - using catalytic gas panels or with electrical heaters. In both system gas or electrical, the oven is designed by dividing the heating elements equally in order to achieve the best heat transfer to the passing work pieces through the oven. The oven body is made of an insulated sheet metal panels.

### ADVANTAGES

- Increases the conveyor speed and the productivity at least with 30%
- Saves space in the workshop
- Provides fuel saving in the medium and long term period in comparison with conventional gas source ovens
- Eliminates powder coating contamination at the air-curtain areas of the tunnel ovens in case is designed as pre-heating oven
- Cured products achieves perfect result in the cross hatch adhesion test

The ovens are CE certificated and conforms to the European Norms.



## SHOT BLASTING SYSTEMS



Manual blasting chambers



Manual blasting equipments



Filter units

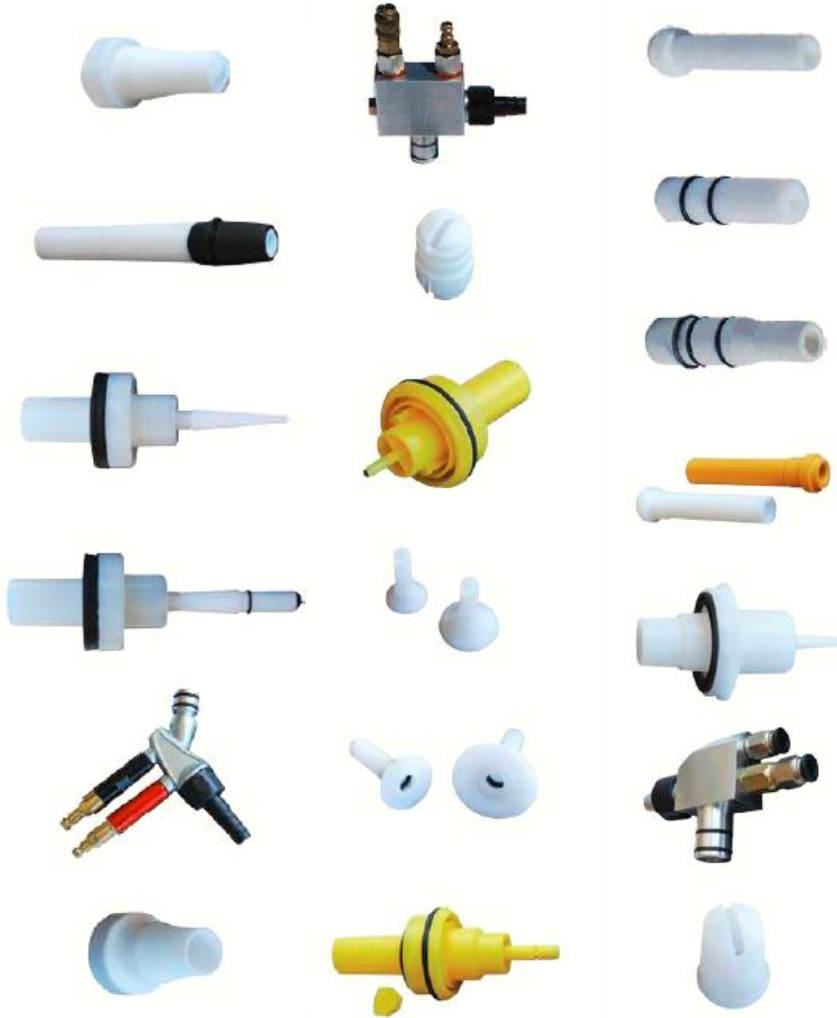


Manual blasting cabinets



## SPARE AND REPLACEMENT PARTS

We provide a big range of durable long lasting  
spare and replacement parts  
MADE IN TURKEY  
for all well known brands powder coating guns  
and equipments.

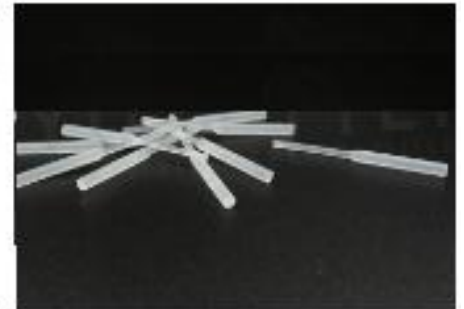


## MASKING PLUGS AND CAPS

Masking caps and hats, resistant to high temperatures, to acids and all kinds of chemicals

PVC Vinyl Hats

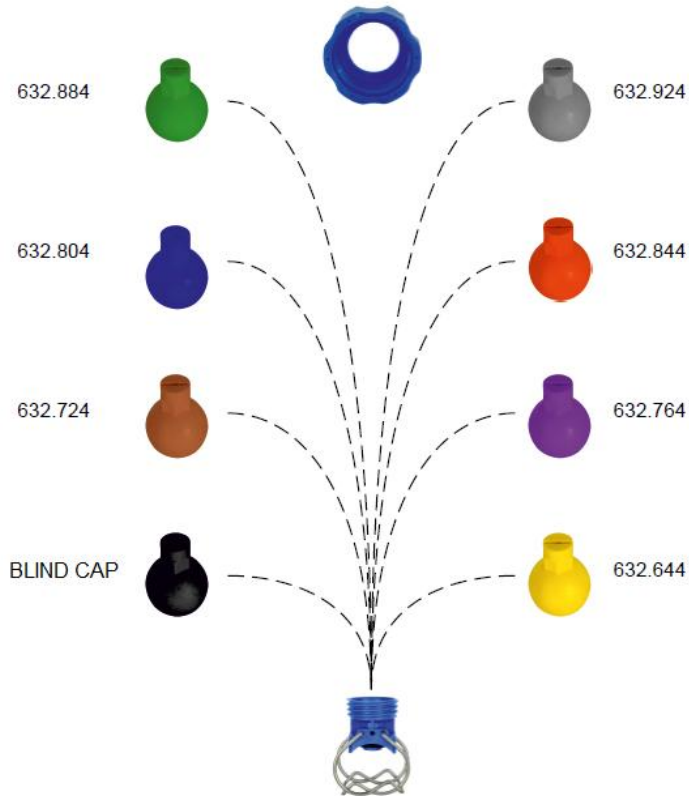
Masking Tape Types



## SPRAY NOZZLES AND ACCESSORIES



# SPRAY NOZZLES AND ACCESSORIES



**NOZZLE FLOW CHART**

Type	Nozzle Angle	Spray At P= H= 250mm	Width 2 Bar H= 500mm	Nozzle Color	V(l/min) P[bar]						
					0.5	1.0	2.0	3.0	5.0	7.0	10.0
632.644	65	295	565	Yellow	2.00	2.83	4.00	4.90	6.33	7.48	8.94
632.724	65	305	590	Brown	3.15	4.46	6.30	7.72	9.96	11.79	14.09
632.764	65	310	595	Purple	4.00	5.66	8.00	9.80	12.65	14.97	17.89
632.804	65	310	595	Blue	5.00	7.07	10.00	12.25	15.81	18.71	23.36
632.844	65	310	595	Red	6.30	8.84	12.50	15.31	19.76	23.39	27.95
632.884	65	310	595	Green	8.00	11.31	16.00	19.46	25.30	29.93	35.78
632.924	65	300	570	Gray	10.00	14.14	20.00	24.50	31.62	37.42	44.71



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