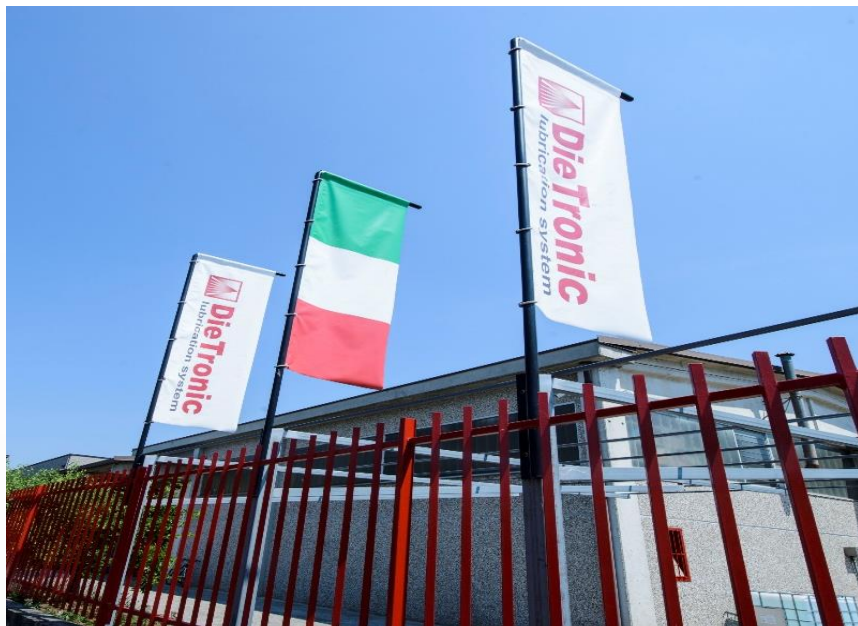


*Sectorial  
SAGOMA  
spray  
lubrication  
system with  
conveyors*





*First DieTronic facility in Via Cavalier Angelo  
Manzoni 28, Sant'Angelo Lodigiano 26866 (LO)  
, Z.I. Maiano*



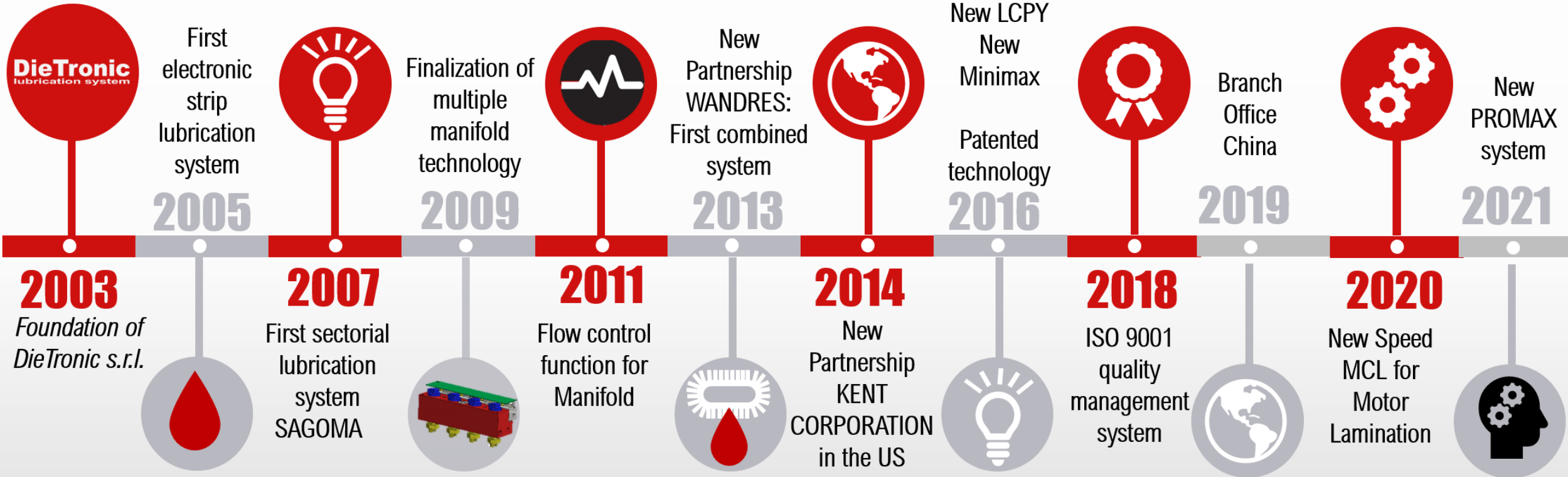
*DieTronic consolidated technology is the result of years of research, development and improvement*

# OUR HISTORY

DieTronic was founded in 2003 thanks to the consolidated know-how and forward-looking vision of its founders, who desired to provide advanced automatic lubrication systems of the highest quality for different metal-forming applications.

Thanks to our over fifteen-years experience, we have been able to develop a consolidated and patented technology, with an internal efficient quality management system certified also by the achievement of ISO 9001:2015.

# OUR HISTORY



# ABOUT US

- 2000 m<sup>2</sup> plant
- +15 years experience
- 615 machines produced



*The new DieTronic plant in Via Madre Teresa di Calcutta 9-13,  
Sant'Angelo Lodigiano 26866 (LO) , Z.I. Malpensata*

# OFFICES



# PRODUCTION



# WAREHOUSE





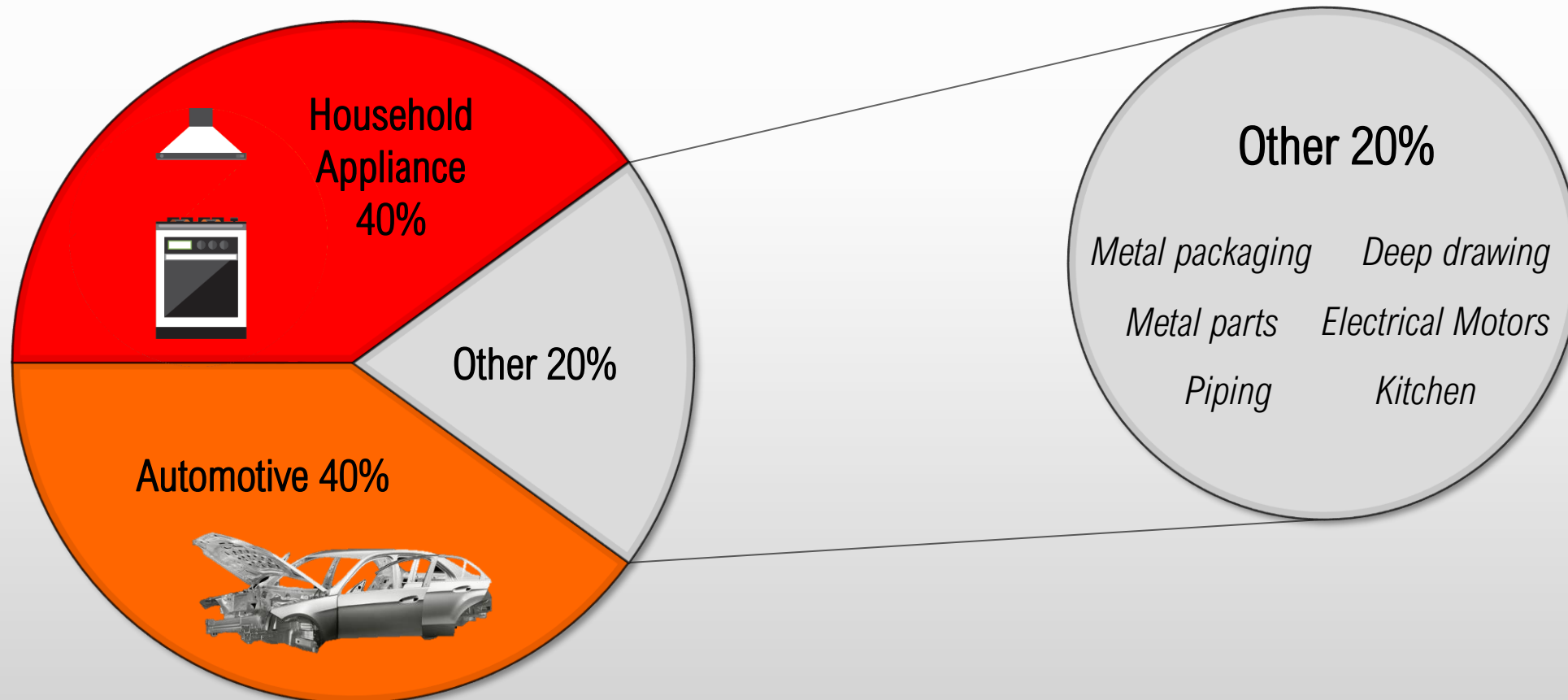
# ***GLOBAL PRESENCE***

DieTronic boasts a long series of collaborations and partnerships with companies and well-known factories in Italy as well as in Europe and all over the world.

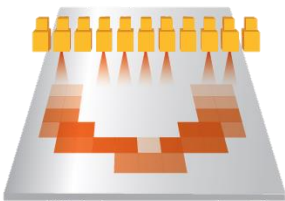
Our distribution network offers support to the customer starting from the consultancy to the assistance and maintenance, also through remote assistance.

# APPLICATION FIELDS

We are suppliers of lubrication systems for different sheet metal-forming applications, mainly for the Automotive and Household Appliance.



# SAGOMA SECTORIAL LUBRICATION MACHINE for HOUSEHOLD APPLIANCE

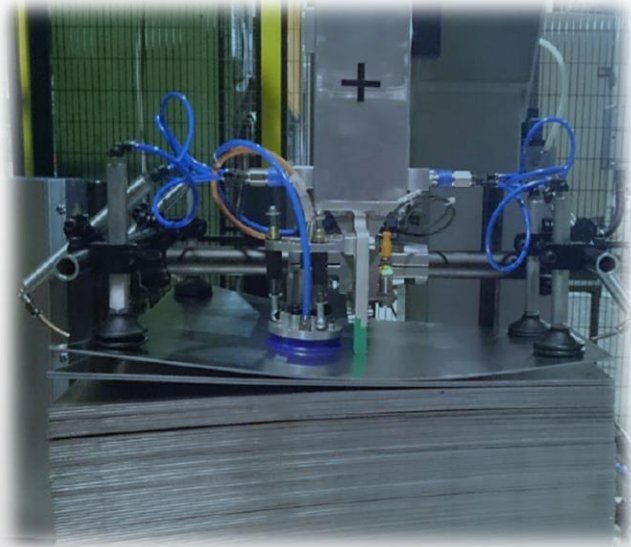


- Possibility to select specific lubrication areas in 50x50 mm patterns
- Suitable for both blank and coil
- Available in different sizes:
  - For blank processing: from 800 to 3000 mm width
  - For coil: from 800 to 2000 mm width
- Integrable with infeed and outfeed conveyors and blank centering system





# *Complete Automated Production*



*Blanks Destaker*    *Infeed conveyor*    *Sectorial Spray Oiler*    *Outfeed conveyor*

*Blanks Destaker*    *Robots*

# DIETRONIC SELECTED FROM SPECIALISTS



Electronic Shimming™ – learn more at [www.hydraulic.com](http://www.hydraulic.com)

## Throw away the shims!

Hydraulic's patented **Electronic Shimming Plate™** offers extreme blankhold control and short start-up time in monoblock deep drawing.

With deep drawing, material flow changes significantly during drawing, often causing problems with wrinkles and cracks.

The **Electronic Shimming™** system developed by Hydraulic has two main components: a plate and a control unit. The shimming plate holds individual pockets or zones, each pressurized by hydraulic oil and each controlled individually. The control system allows users to set up pressure zones on the plate, modify pressure during a part run and save the settings for future recall.

**Electronic Shimming™** reduces scrap rates, facilitates production control, and allows for quick and uncomplicated tool changing.



Wrinkles and buckles as a result of uncontrolled material flow during deep draw



Electronic Shimming™ produces flawless products due to extreme blankhold control



Electronic Shimming Plate™



The new Hydraulic 1800 line is a powerful, versatile press, packed with advanced functionality – to boost your productivity.

# ADVANTAGES

## BETTER QUALITY

- Deep draws up to 15% deeper
- More homogeneous thickness distribution
- Improved flanges flatness

## MORE PRODUCTIVITY

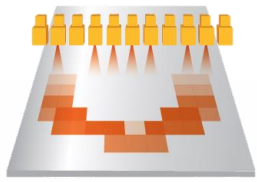
- 200 extra units/product change  
(no startup time)
- 10% more output per shift  
(adjustable on the fly)

## IMPROVED PROCESS

- Eliminates wrinkles and cracks
- Reduces polishing and annealing costs
- Increases consistency, allowing automation

## MORE EFFICIENCY

- Save up to 5% in blank size
- Save up to 15% in blank thickness
- Reduce scrap by 50%



# SAGOMA SECTORIAL LUBRICATION MACHINE with automation



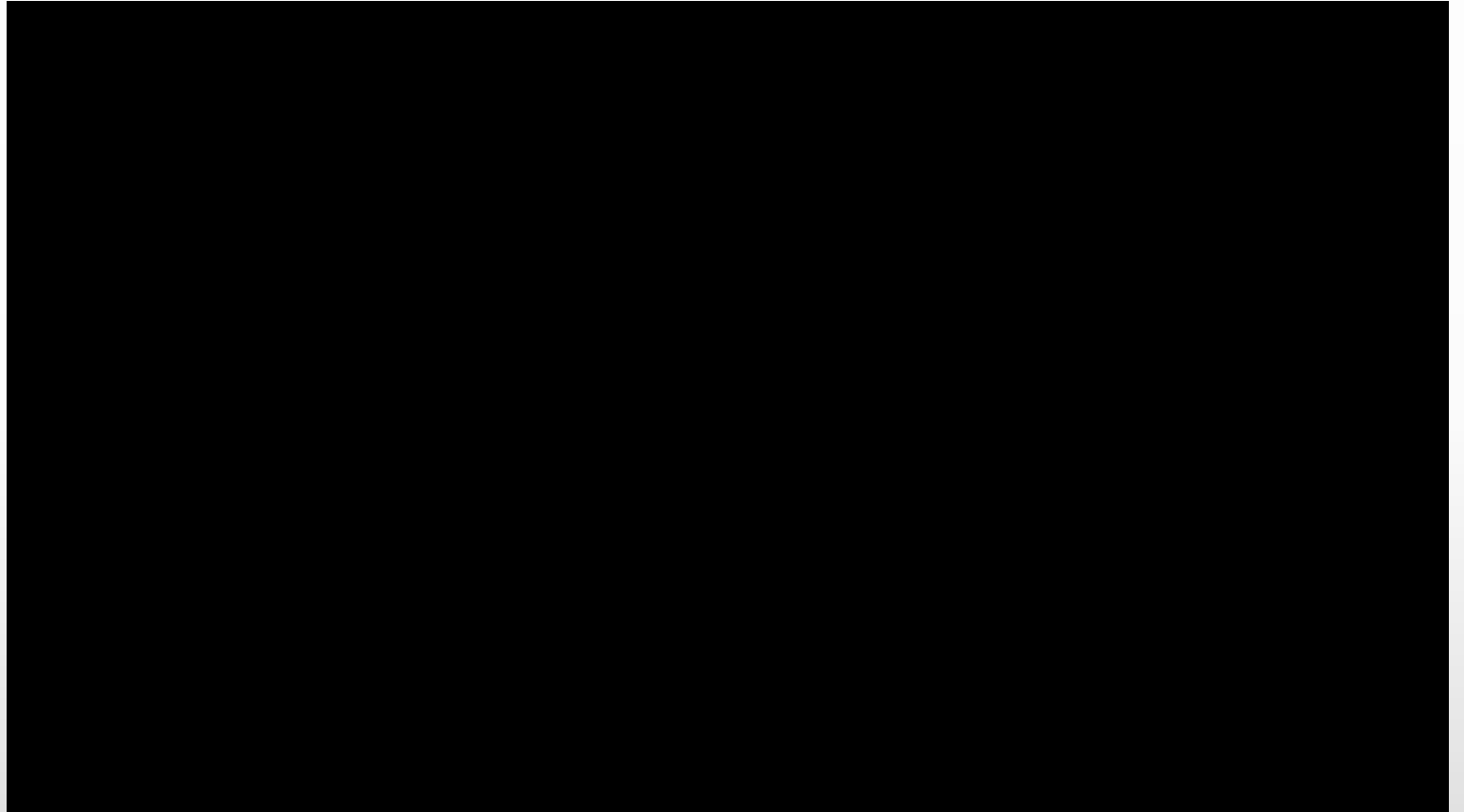
# INFEEED AND OUTFEED CONVEYORS

- Special chain transport conveyor with frontal and lateral centering system
- ✓ correct blank positioning during transit

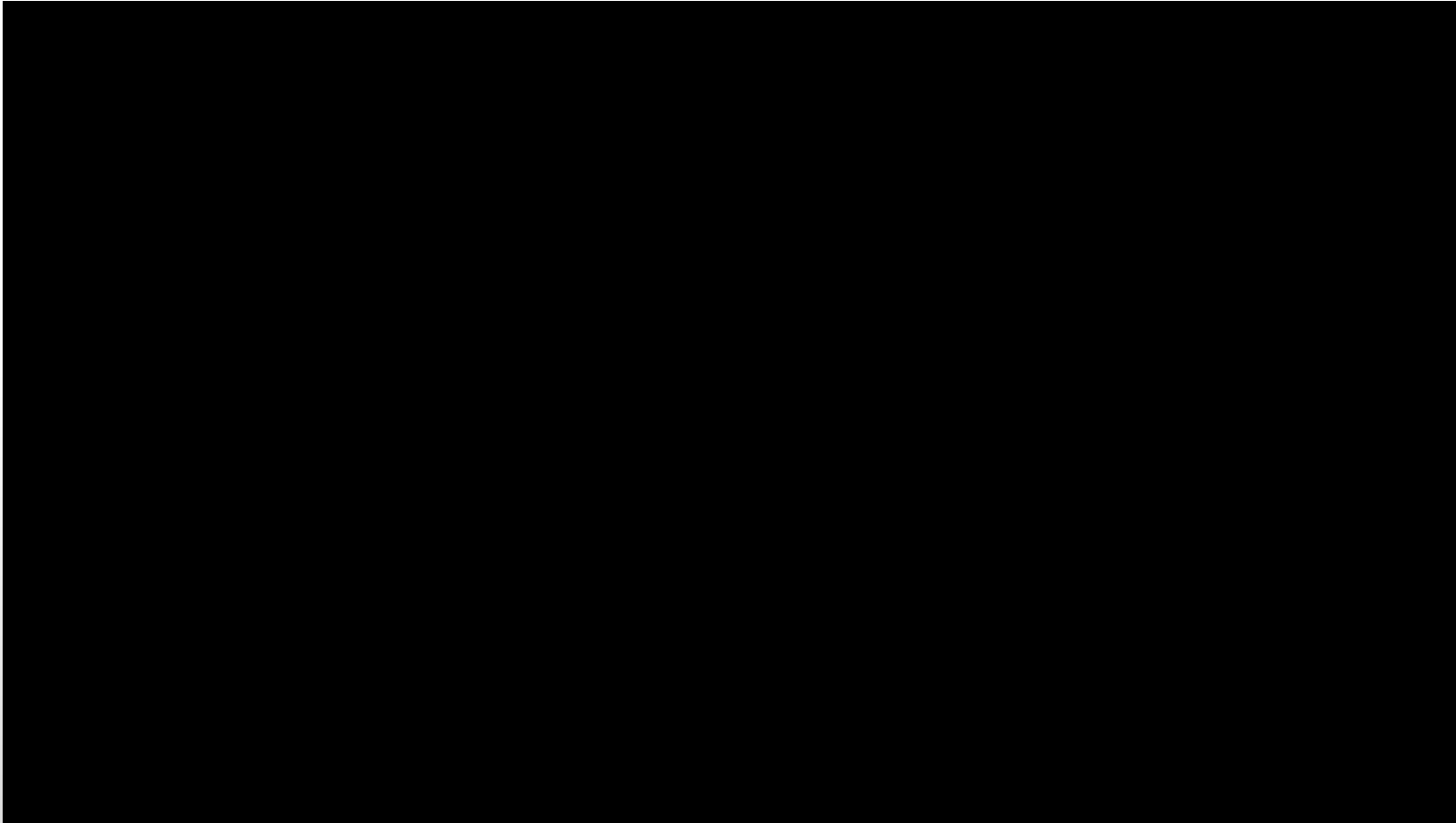


# OIL MIST EXTRACTION SYSTEM

- To minimize the presence of oil mists on the inside of the spray chamber, all of our Sagoma systems are provided with an oil mist extraction system with high efficiency filter.
- An analogic pressure gauge ensures the monitoring of the filter lifetime.

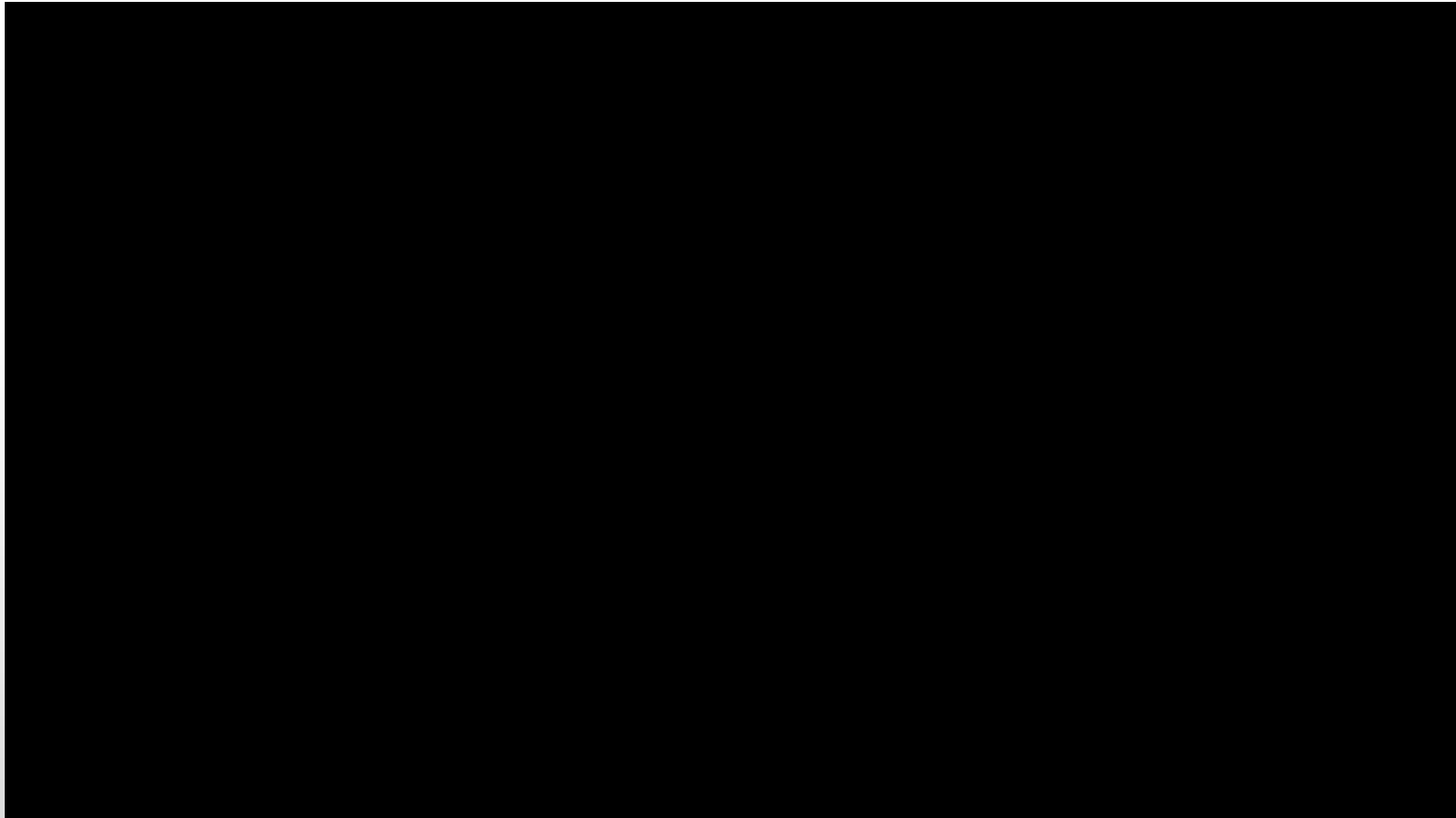


# ANTI-DROP WIPER



- Thanks to its transversal movement, the Wiper system collects the oil drops in the inside walls of the spray chamber and prevents them from falling onto the passing blank.

# CLOSED AND EXTRACTABLE SPRAY HEADS



- Upper and a lower closed and extractable sprayheads
  - ✓ *Cleaner and safer working environment*
  - ✓ *Easier maintenance*
- Patented Modular Manifolds
  - ✓ *Quick replacement*
- Reduced distance of only 50 mm
  - ✓ *More precise oil application and minimum overspray to control*

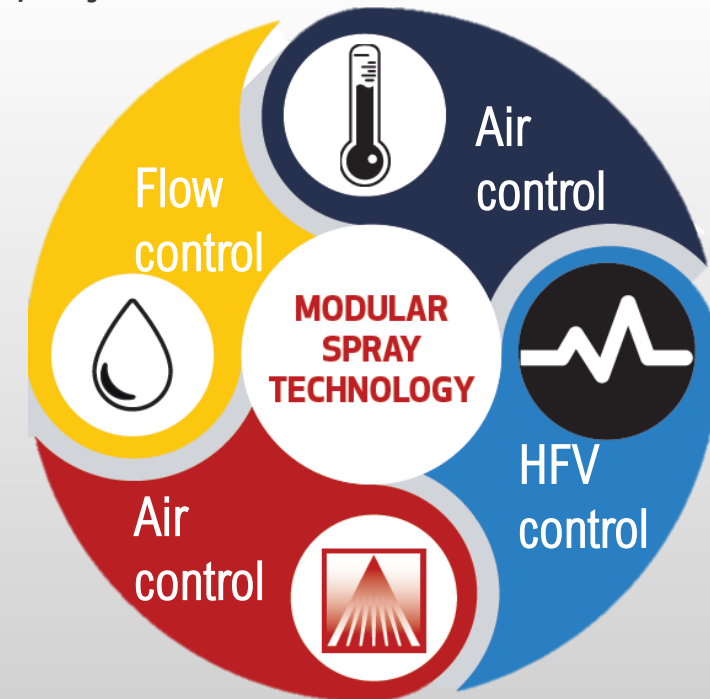
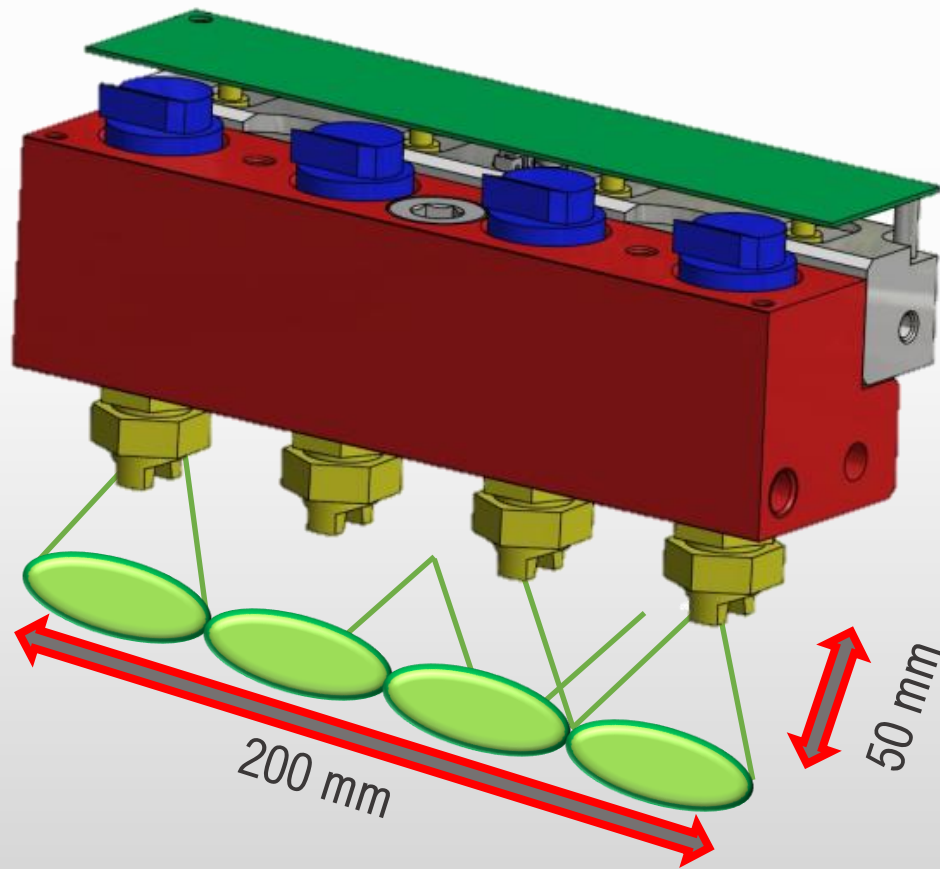


# DIETRONIC® MODULAR MANIFOLD TECHNOLOGY

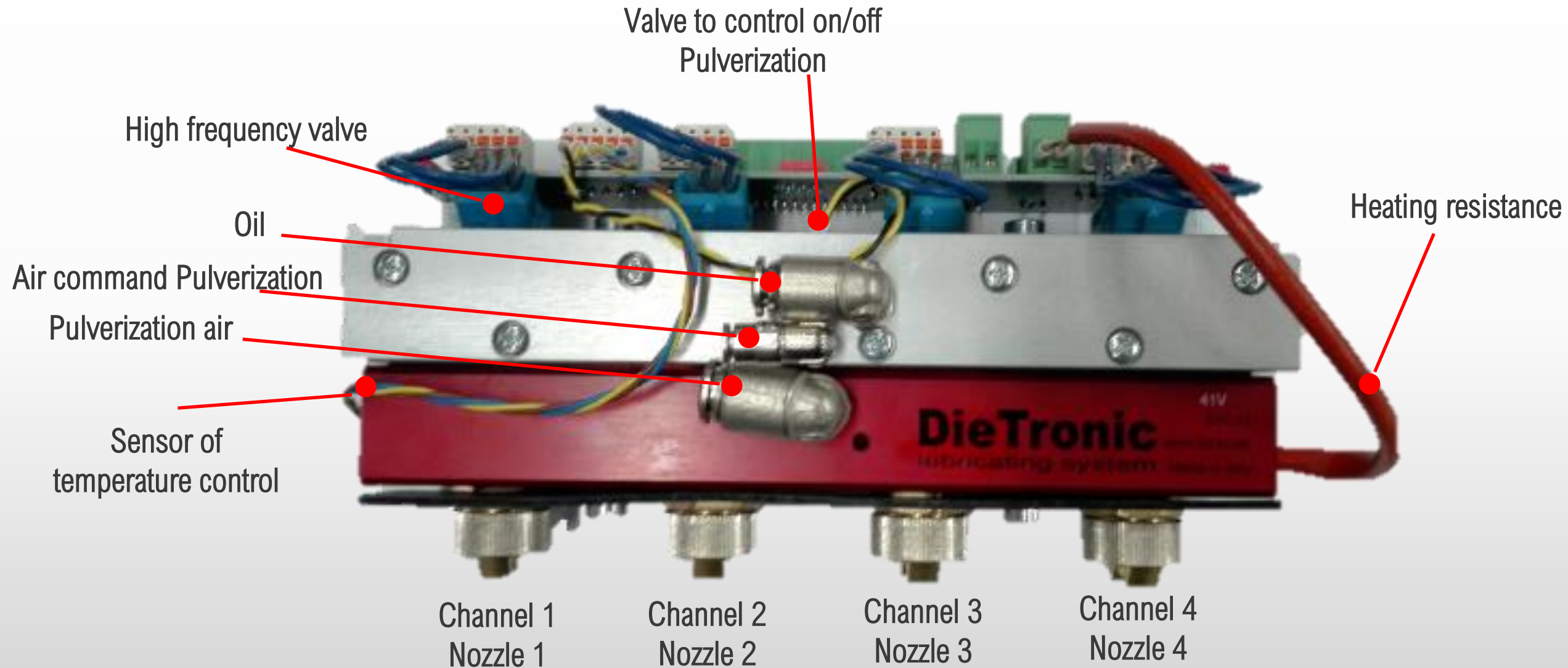
## DIETRONIC® MODULAR MANIFOLD TECHNOLOGY

Due to the design of DieTronic solution (just 50 mm distance), instead of a conventional spray machine, there is a substantial reduction in spray-oil mist

- ✓ No overspray to control
- ✓ Less oil mist



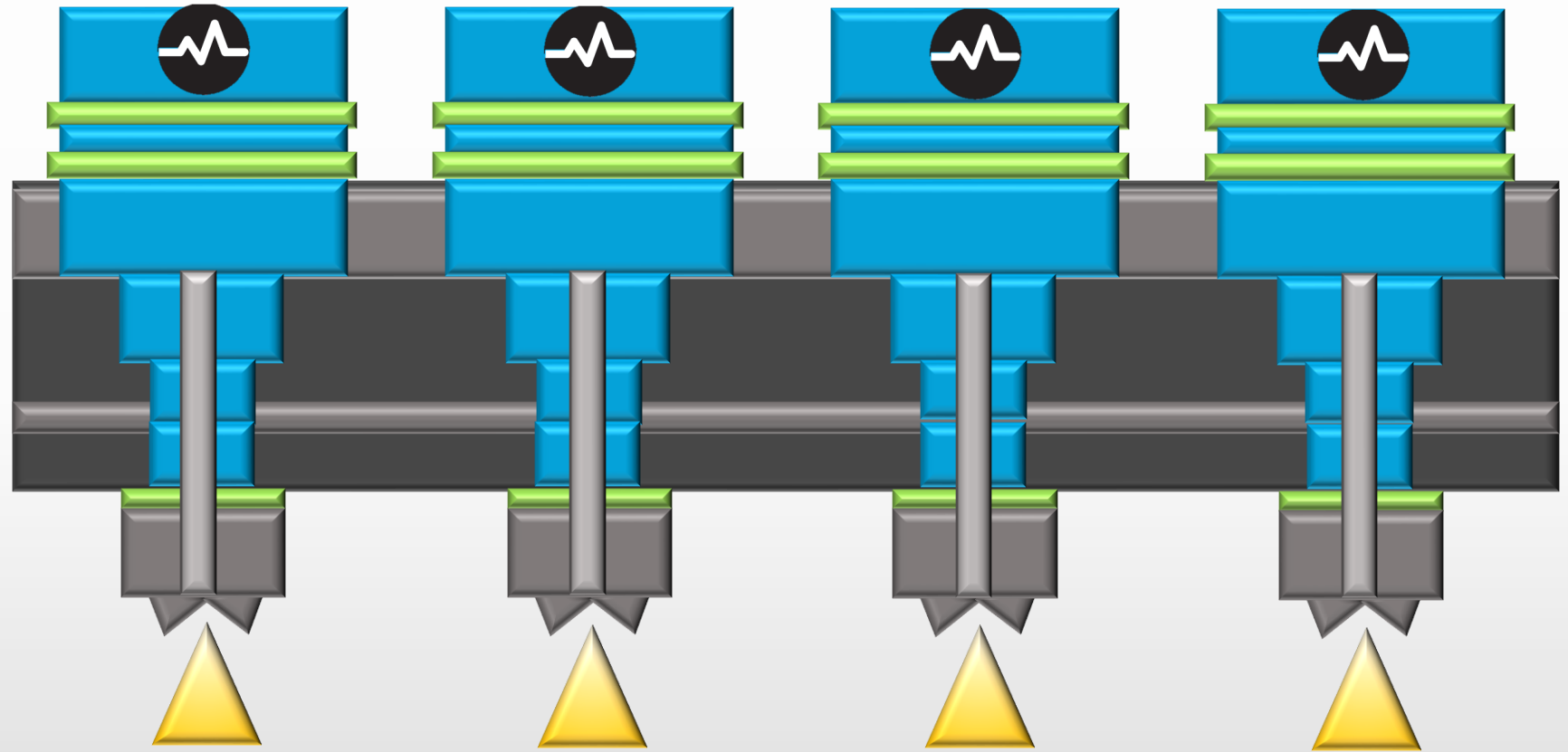
# MODULAR MANIFOLD



# SAGOMA® HFV TECHNOLOGY

## THE FUNCTIONS OF THE MANIFOLD

AUTOMATIC VOLUME  
ADJUSTABLE THROUGH HFV  
(HIGH FREQUENCY VALVE)

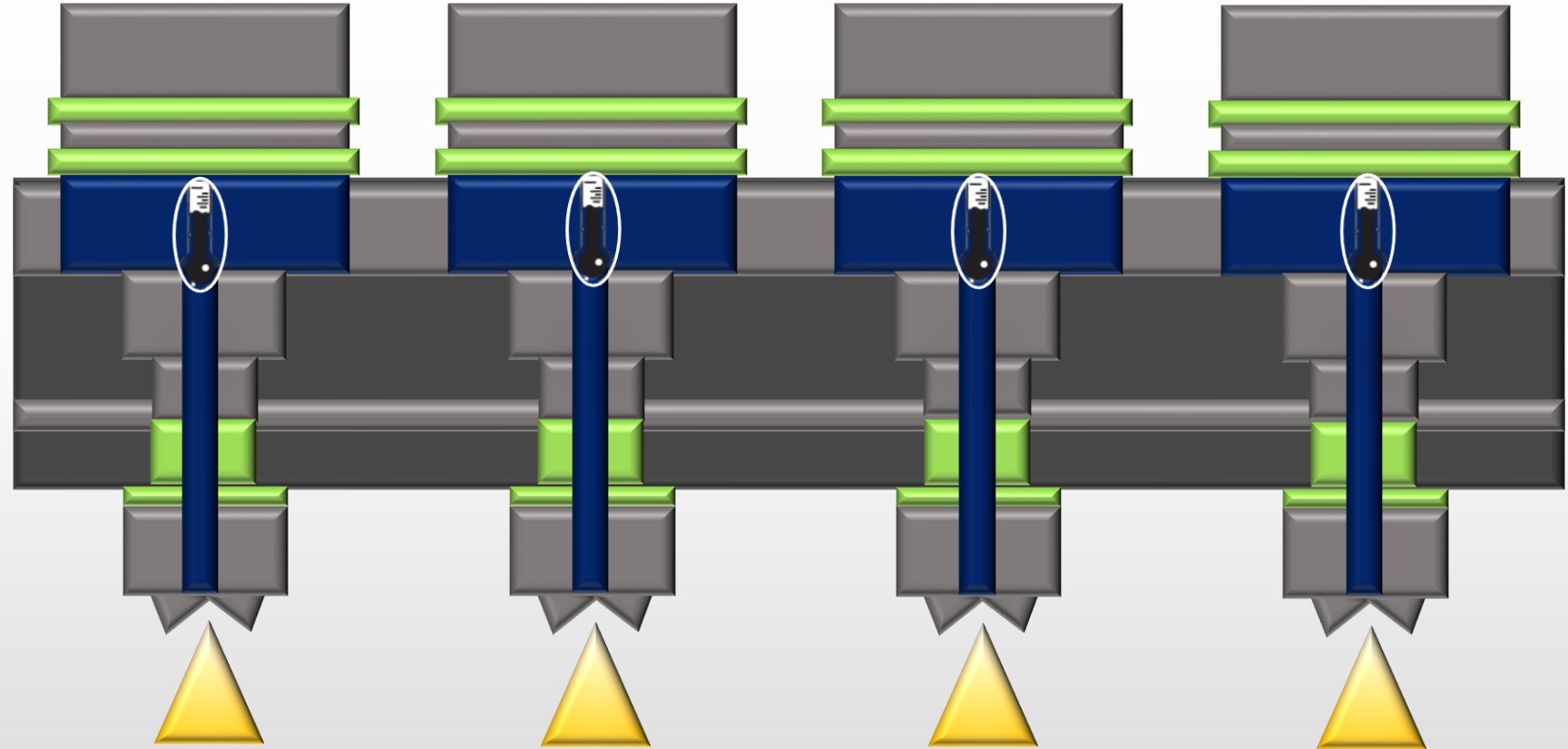


## DT HFV ® OIL FLOW CONTROL

# SAGOMA® HFV TECHNOLOGY DieTronic lubrication system

## THE FUNCTIONS OF THE MANIFOLD

HEATING SYSTEM  
INTEGRATED WITH  
TEMPERATURE CONTROL  
FOR EACH MANIFOLD

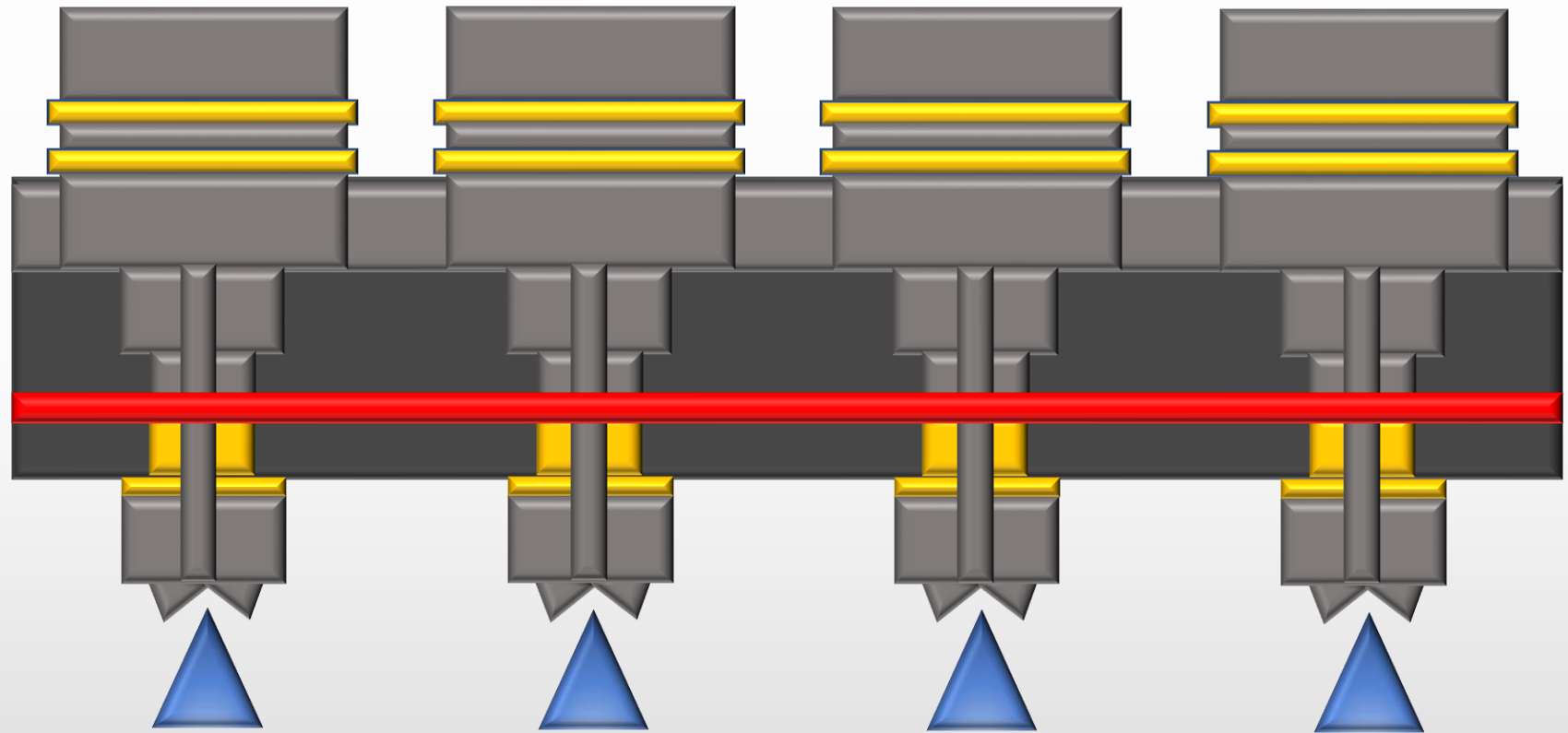


## DT TEMP® CONTROL

# SAGOMA® HFV TECHNOLOGY

## THE FUNCTIONS OF THE MANIFOLD

AIR SPRAY CONTROL VALVE  
INTEGRATED IN EACH  
MANIFOLD WITH ELECTRONIC  
ADJUSTMENT



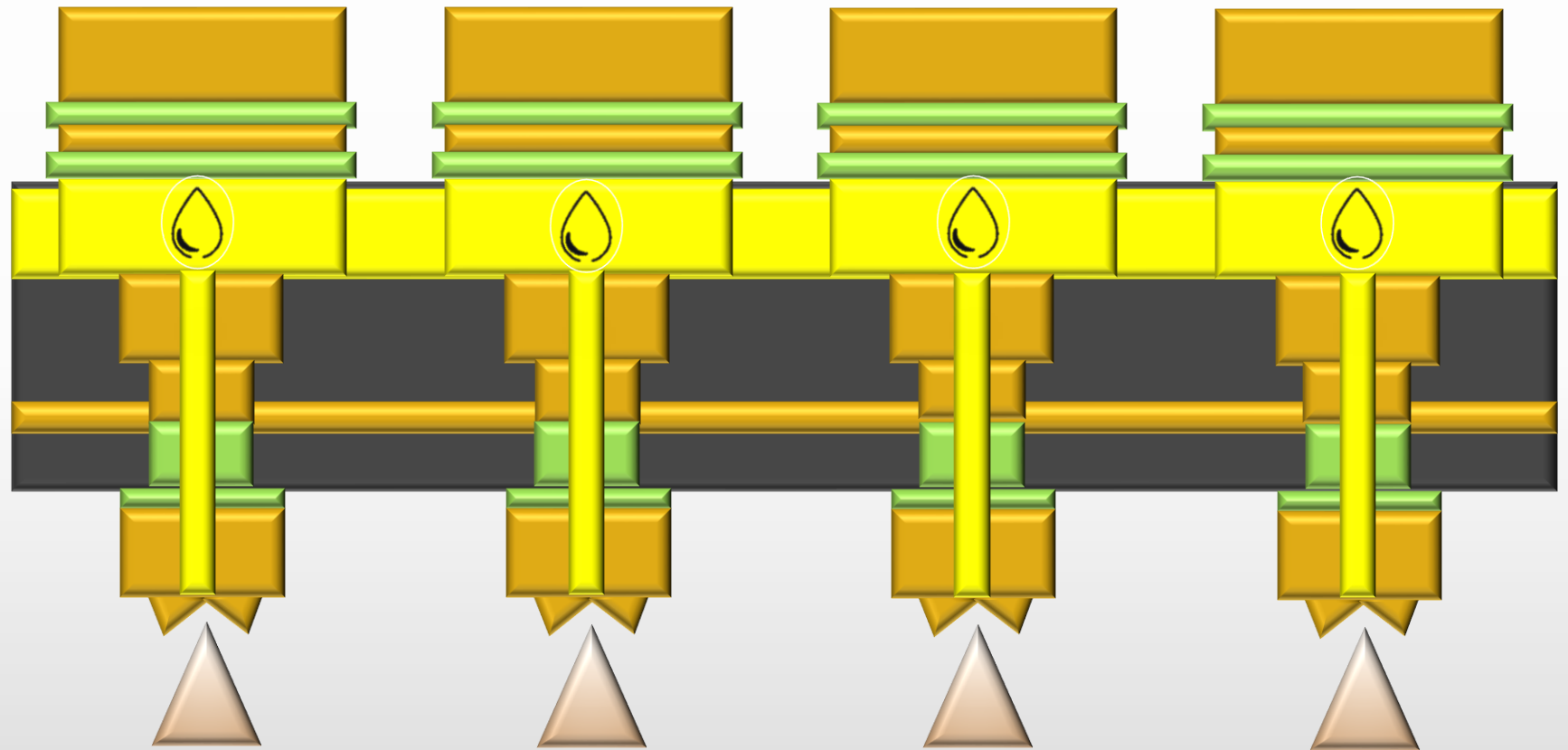
### DT AIR® CONTROL

# SAGOMA® HFV TECHNOLOGY

## THE FUNCTIONS OF THE MANIFOLD



TEST FUNCTION TO ENSURE  
THE PERFORMANCE OF EACH  
NOZZLE

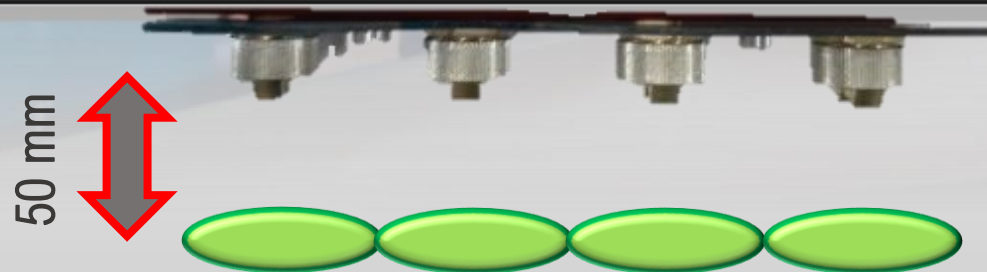
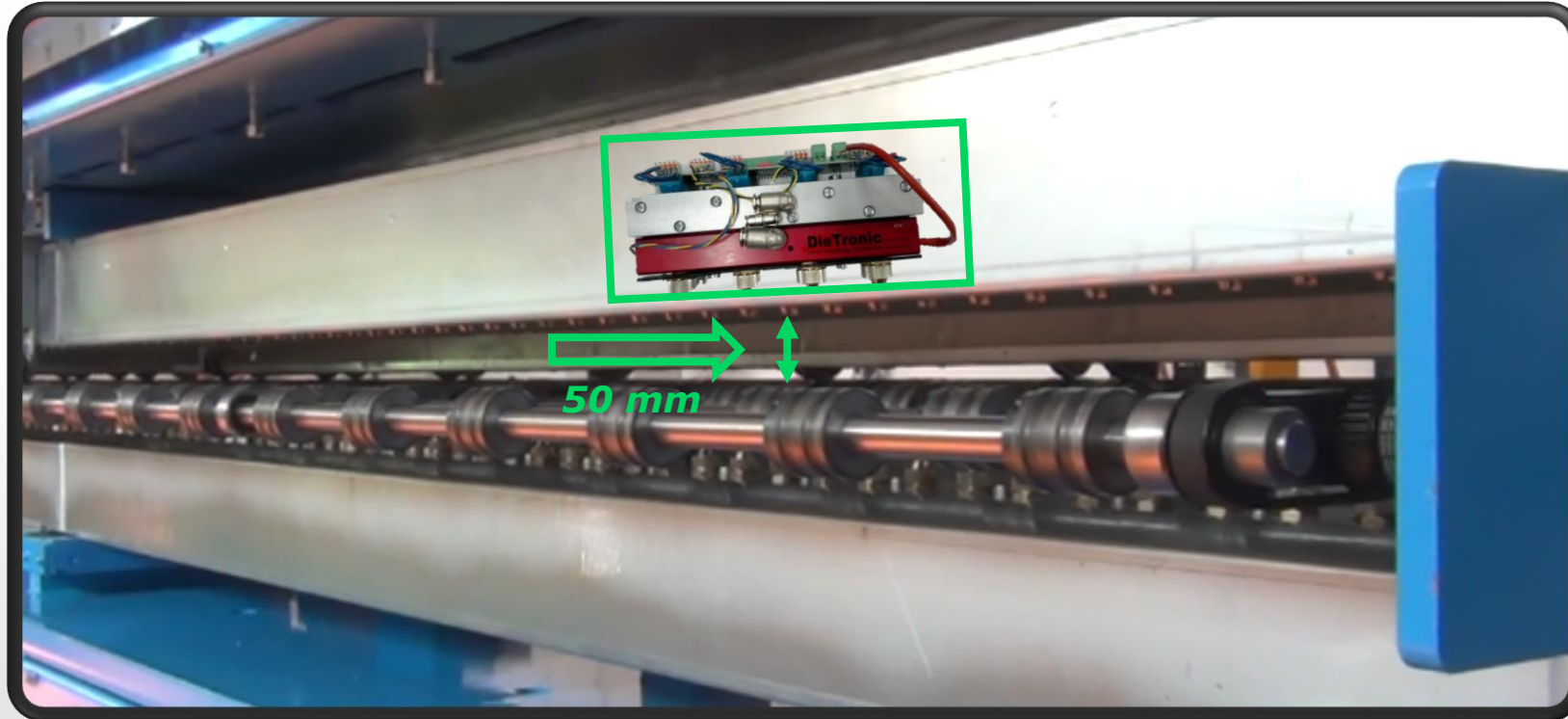


### DT SENSOR® CONTROL

# RESTRAIN CONTAMINATION

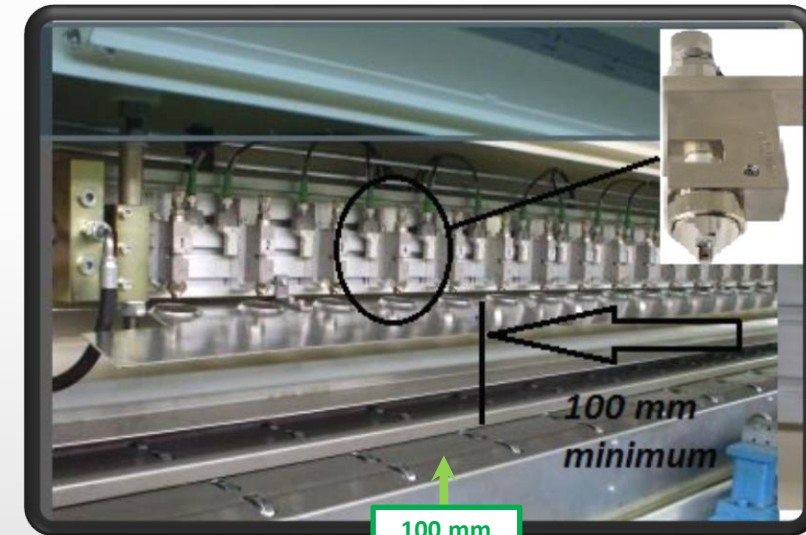
## DIETRONIC CLOSED SYSTEM

to avoid any contamination of parts as tube pipe and electrical device

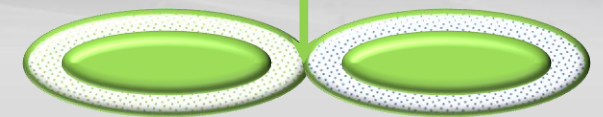


## CONVENTIONAL OPEN SYSTEMS

Oil mist dispersion on all parts of the cabinet



100 mm



Imprecise spray application with more overspray to control

# OIL MANAGEMENT

DieTronic systems are designed to work with most **oil-media** (pure oils with low, medium and high-viscosity, as well as water-based oils)

- In case of high-viscosity oils → integration with *heating system*
- In case of water-based oils → integration with *dosi-mixer system*



# MULTIPLE OIL MANAGEMENT

In order to manage multiple oil-media automatically and separately, to avoid contamination:

- our systems can be equipped with one or more tanks (each provided with a *visual and an electric oil level indicator*, displayed also on the touch-screen panel.)
- additional tank for the cleaning product, to perform the *cleaning of the whole circuit* before the oil exchange



# CLEANING PROCEDURE



## PURGE

the lubricant from the channel manifold valves to the nozzles is pushed out by compressed air



## CLEAN

the cleaning liquid flows from the channel valves to the nozzles



## DRY

the cleaning product from the channel manifold valves to the nozzles is pushed out by compressed air



## REFILL

The refill of the spray heads is really fast due to the previous steps

# EXTERNAL CLEANING UNIT

- ✓ Quick cleaning maintenance of the spray heads
- ✓ Testing Unit of the nozzles



**Solution 1** – External Cleaning Unit integrated on the side of the oil tanks with trolley



**Solution 2** –Trolley with External Cleaning Unit



**Solution 3** – External Cleaning Unit integrated on the tank with trolley and Waste tank

# EXTERNAL QUICK CLEANING UNIT FOR SPRAYHEADS

- To **test the functionality** of the individual nozzles
- To **clean quickly and automatically** and **facilitate off-line maintenance operations** on the spray heads; **without having to stop production**, if you have additional spray heads
- Versatile and adaptable to new or existing lines
- For spray heads of various sizes
- (Possible addition on board the Waste recovery tank



# OIL TANK: DOSI MIXER

---

- In case of water-based products, the tank can be integrated with a mixing system that grants a constant mixture of oil and water
- Water quantity and the percentage of oil to mix settable from operator panel

\*to keep the right performance of the machine and good quality of mixed product, we suggest to use demi-water



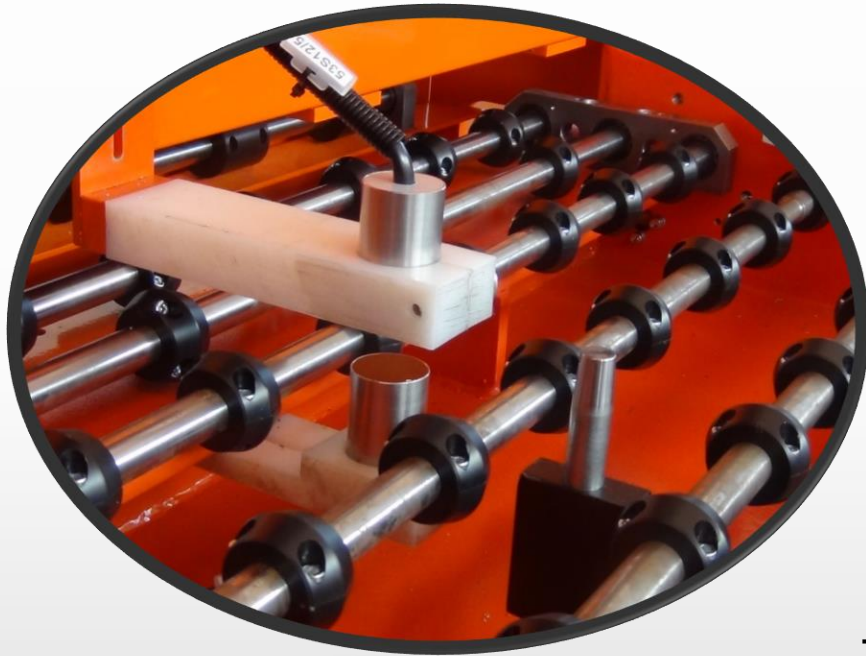
# OIL TANK: AUTOMATIC OIL REFILL

---



- Automatic oil refill System from 200 or 1000 lt barrel to the main oil tank
- ✓ No more lubricant manual movements
- ✓ Easier working operations
- ✓ No more environment contamination

# DOUBLE BLANK DETECTOR

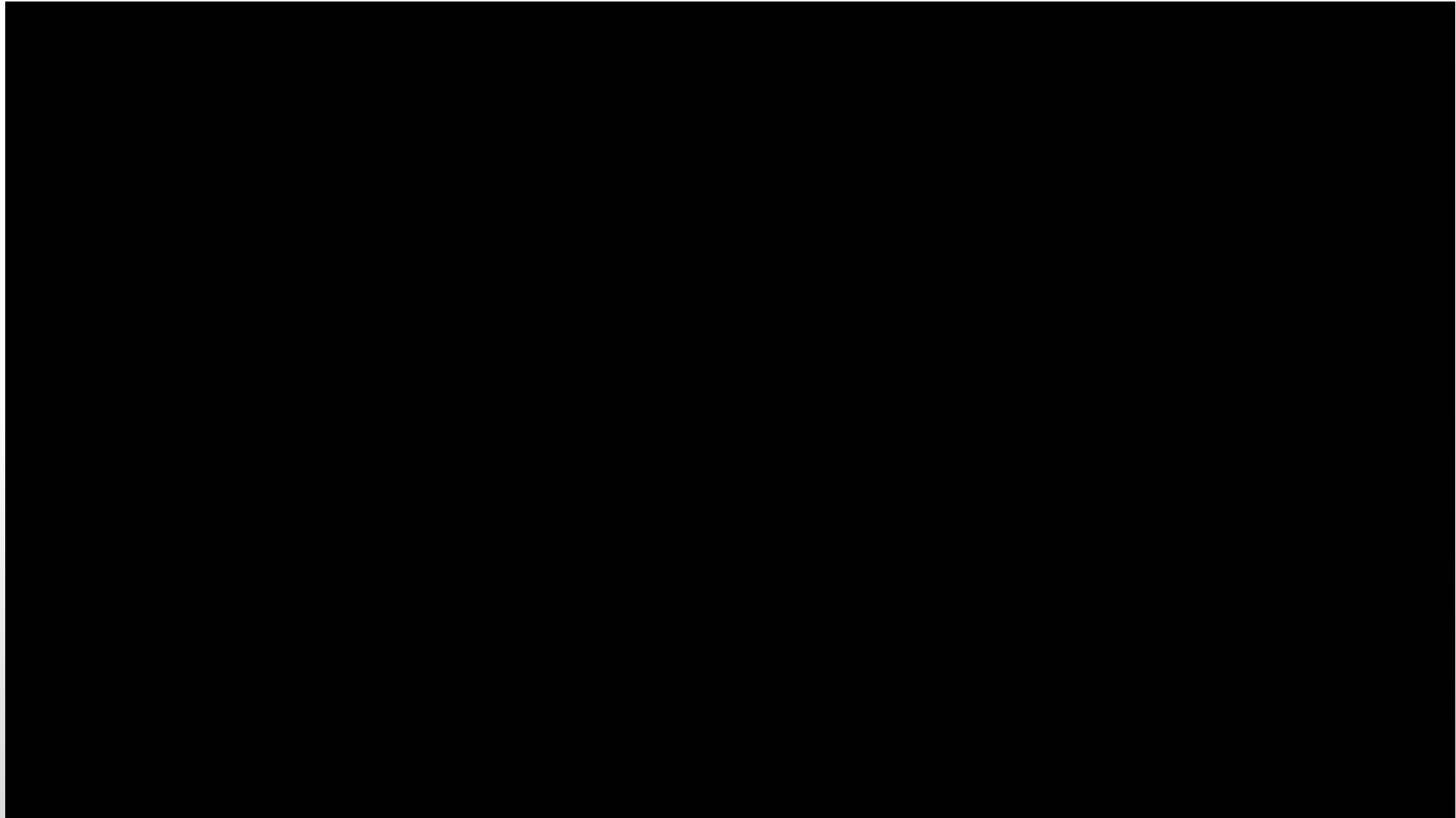


Positioned after the machine.

The sensor detects the passage of one or more blanks, or if the outfeed conveyor it's free.

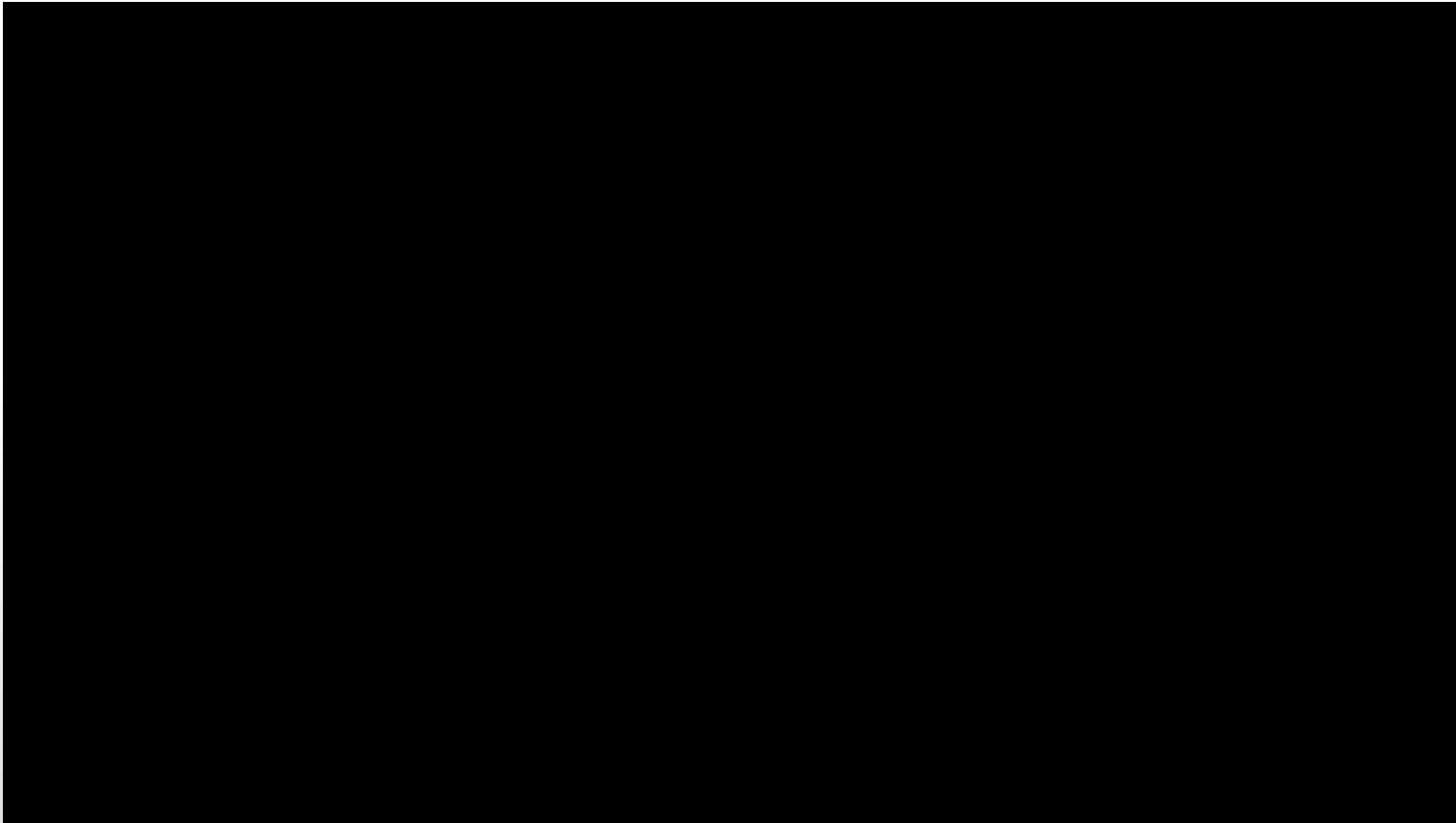
In case of double blanks, the machine stops and the transport reverses the run direction to return the sheets at the infeed conveyor.

# DOUBLE BLANK DETECTOR



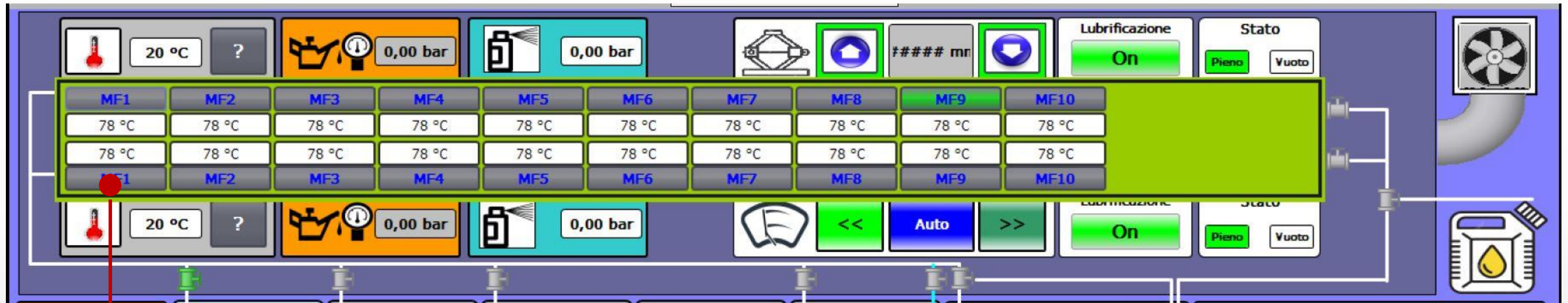


# USER-FRIENDLY OPERATOR PANEL



- 19" Siemens Control Panel
- Adjustment of the oil quantity, from 0,5 to 3 g/m<sup>2</sup>
- 8 different colors identify 8 different quantities
- Possibility to save recipes and recall them

# SPRAYBOX DIAGNOSTICS



- Temperature Monitoring for each single Manifold



1 +0,000 A	13 +0,000 A	25 +0,000 A	37 +0,000 A
2 +0,000 A	14 +0,000 A	26 +0,000 A	38 +0,000 A
3 +0,000 A	15 +0,000 A	27 +0,000 A	39 +0,000 A
4 +0,000 A	16 +0,000 A	28 +0,000 A	40 +0,000 A
5 +0,000 A	17 +0,000 A	29 +0,000 A	
6 +0,000 A	18 +0,000 A	30 +0,000 A	
7 +0,000 A	19 +0,000 A	31 +0,000 A	
8 +0,000 A	20 +0,000 A	32 +0,000 A	
9 +0,000 A	21 +0,000 A	33 +0,000 A	
10 +0,000 A	22 +0,000 A	34 +0,000 A	
11 +0,000 A	23 +0,000 A	35 +0,000 A	
12 +0,000 A	24 +0,000 A	36 +0,000 A	

1 +0,000 A	13 +0,000 A	25 +0,000 A	37 +0,000 A
2 +0,000 A	14 +0,000 A	26 +0,000 A	38 +0,000 A
3 +0,000 A	15 +0,000 A	27 +0,000 A	39 +0,000 A
4 +0,000 A	16 +0,000 A	28 +0,000 A	40 +0,000 A
5 +0,000 A	17 +0,000 A	29 +0,000 A	
6 +0,000 A	18 +0,000 A	30 +0,000 A	
7 +0,000 A	19 +0,000 A	31 +0,000 A	
8 +0,000 A	20 +0,000 A	32 +0,000 A	
9 +0,000 A	21 +0,000 A	33 +0,000 A	
10 +0,000 A	22 +0,000 A	34 +0,000 A	
11 +0,000 A	23 +0,000 A	35 +0,000 A	
12 +0,000 A	24 +0,000 A	36 +0,000 A	

# SPRAYBOX DIAGNOSTICS

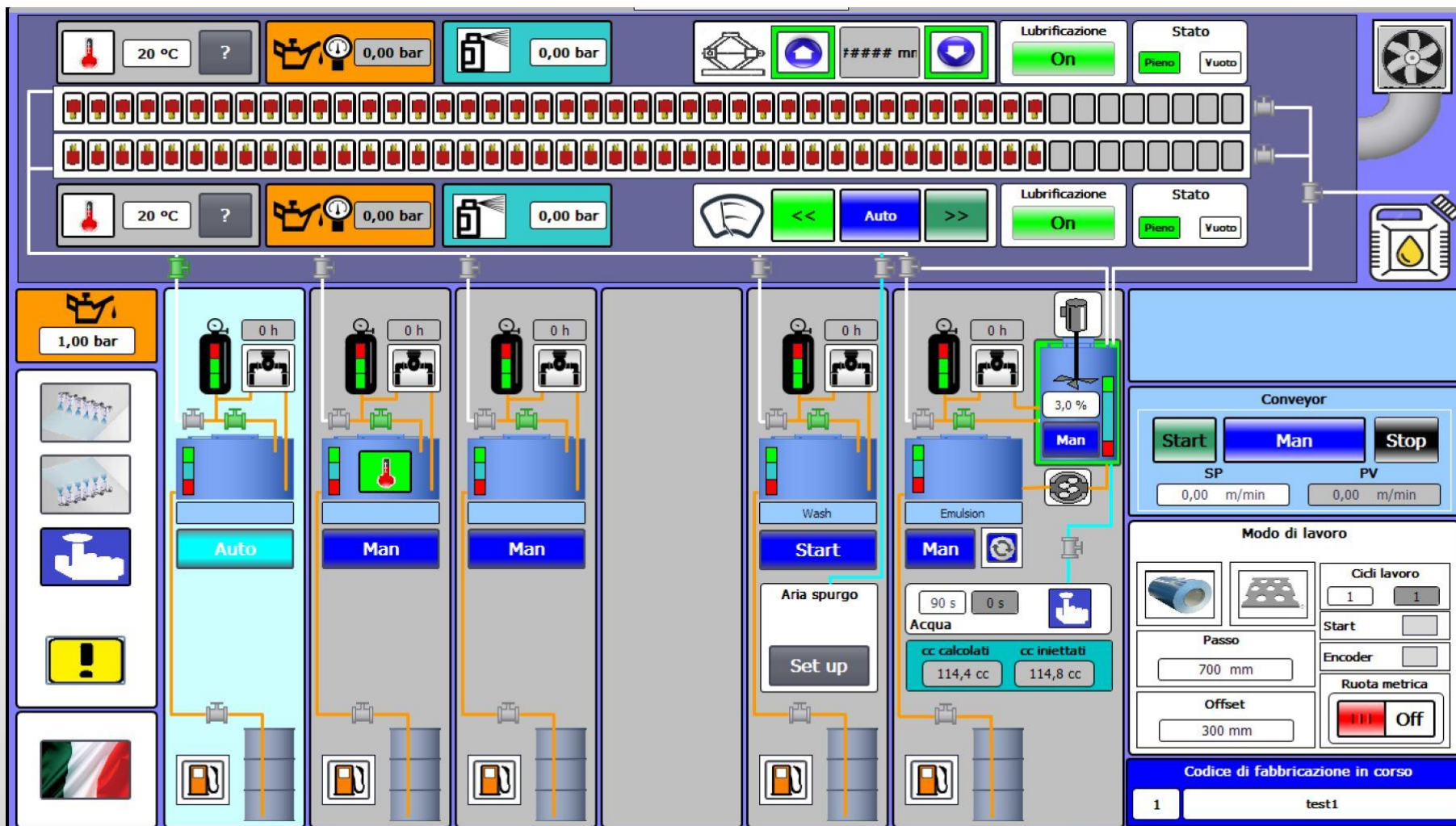
- Test to check the correct functionality of every single spray nozzle



# SPRAYBOX DIAGNOSTICS

- To check the working time of every single nozzle

# FLUID MANAGEMENT DIAGNOSTICS



# ALARMS

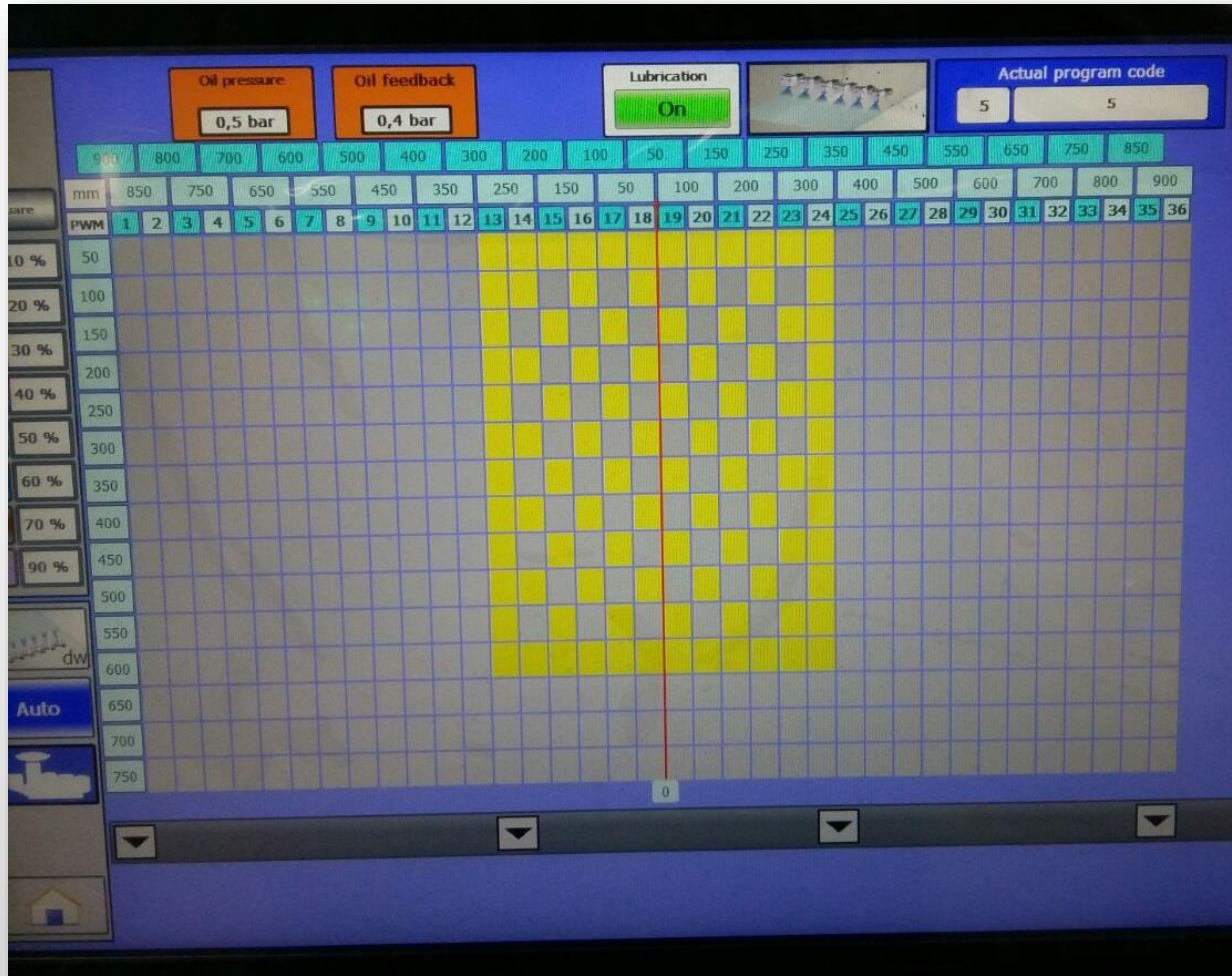
USCITA					
N°.	Tempo	Data	Stato	Testo	
NA 4	17:20:44	18/01/2021	E	Livello massimo accumulatore olio1 superato	
NA 6	19:16:56	14/01/2021	E	Allarme comunicazione profinet	
NA 3	19:16:56	14/01/2021	E	Mancanza aria compressa Spray Box	
NA 14	19:16:56	14/01/2021	E	Protezione 48 Vac intervenuta	
NA 19	19:16:56	14/01/2021	E	Cassetta Spray Box aperta	
NA 28	19:16:56	14/01/2021	E	Intervento termico aspiratore	
NA 36	19:16:56	14/01/2021	E	Intervento termico riscaldamento serbatoio 2	
NA 34	19:16:56	14/01/2021	E	Intervento termico riscaldamento inferiore	
NA 33	19:16:56	14/01/2021	E	Intervento termico riscaldamento superiore	
NA 66	19:16:56	14/01/2021	E	Protezione alimentatore 12Vdc	
NA 65	19:16:56	14/01/2021	E	Protezione raffreddamento quadro	
NA 78	19:16:56	14/01/2021	E	Allarme mancanza aria serbatoio	
NA 77	19:16:56	14/01/2021	E	Allarme motore conveyor	
NA 76	19:16:56	14/01/2021	E	Intervento protezione motore pompa mixer	
NA 72	19:16:56	14/01/2021	E	Livello minimo serbatoio	

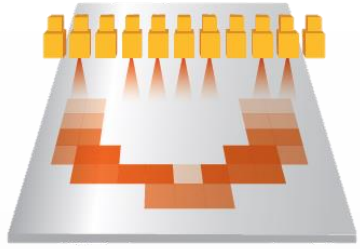
USCITA					
N°.	Tempo	Stato	Testo		
NA 4	17:20:44	E	Livello massimo accumulatore olio1 superato		
NA 4	17:20:43	(E)U	Livello massimo accumulatore olio1 superato		
NA 4	09:45:23	E	Livello massimo accumulatore olio1 superato		
NA 4	09:45:22	(E)U	Livello massimo accumulatore olio1 superato		
NA 42	09:45:22	(E)U	Livello massimo accumulatore Emulsion superato		
NA 80	09:45:22	(E)U	Allarme encoder conveyor		
NA 84	09:45:22	(E)U	Waste tank pieno o disabilitato		
NA 26	09:45:22	(E)U	Livello minimo serbatoio Emulsion		
NA 6	19:16:56	E	Allarme comunicazione profinet		
NA 4	19:16:56	E	Livello massimo accumulatore olio1 superato		
NA 3	19:16:56	E	Mancanza aria compressa Spray Box		
NA 14	19:16:56	E	Protezione 48 Vac intervenuta		
NA 19	19:16:56	E	Cassetta Spray Box aperta		
NA 42	19:16:56	E	Livello massimo accumulatore Emulsion superato		
NA 28	19:16:56	E	Intervento termico aspiratore		
NA 36	19:16:56	E	Intervento termico riscaldamento serbatoio 2		
NA 34	19:16:56	E	Intervento termico riscaldamento inferiore		
NA 33	19:16:56	E	Intervento termico riscaldamento superiore		
NA 66	19:16:56	E	Protezione alimentatore 12Vdc		
NA 65	19:16:56	E	Protezione raffreddamento quadro		
NA 80	19:16:56	E	Allarme encoder conveyor		
NA 78	19:16:56	E	Allarme mancanza aria serbatoio		
NA 77	19:16:56	E	Allarme motore conveyor		
NA 76	19:16:56	E	Intervento protezione motore pompa mixer		
NA 84	19:16:56	E	Waste tank pieno o disabilitato		
NA 72	19:16:56	E	Livello minimo serbatoio		
NA 26	19:16:56	E	Livello minimo serbatoio Emulsion		

- Page of actual alarms on the machine

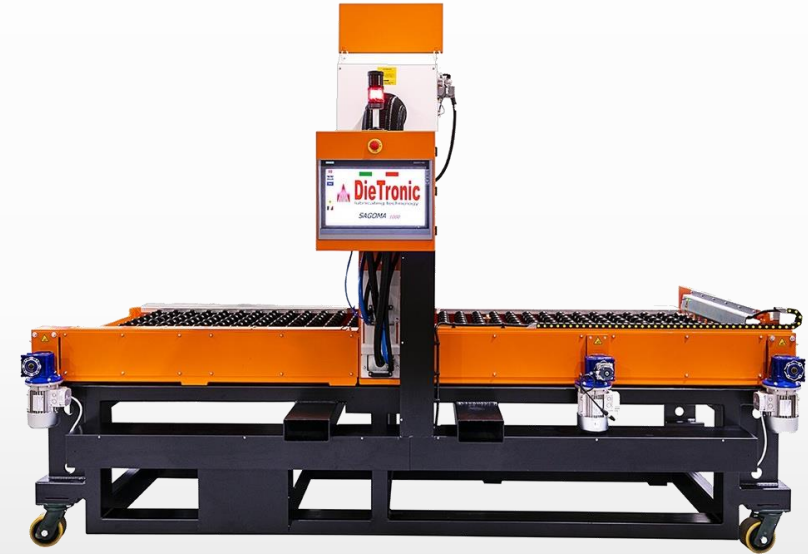
- Summary of previous alarms on the machine

# SPRAY AREA SELECTION





# Top selling SAGOMA 1000 with conveyors



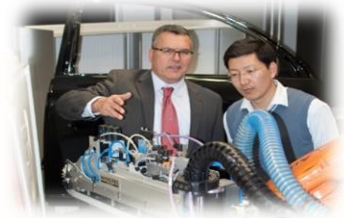
**ELKAY**<sup>®</sup>  
United States

**FRANKE**  
Netherlands

**AGA RANGEmaster**  
United Kingdom



# LOCAL TECHNICAL SUPPORT WORLDWIDE



DieTronic



- Our Team is available worldwide for:
- Technical Support
  - Periodical Maintenance Programs
  - Possibility of remote assistance (h24)
  - Spare Parts Stock, completely available in
    - ✓ Italy
    - ✓ US
    - ✓ China
    - ✓ Brazil



# References Automotive OEM



General Motors



# References Automotive T1 and T2



# References Integrators



**GÜDEL**

**SCHULER**  
Member of the ANDRITZ GROUP

**FAGOR**



HYUNDAI  
**Rotem**

**Nidec**  
**ARISA**

**MECFOND S.p.A.**

**CAVENAGHI & RIDOLFI**  
PRESSE OLEODINAMICHE DAL 1922

**IMV** PRESSE MECCANICHE  
**PRESSE**



**SANGIACOMO**  
presse

**MOSSINI** PRESSE

**OMERI**  
Nel mondo, nel tempo

**ZANI** presse

**GALDABINI**  
1890

**NORDA**

**Hydraulic**

**CoilTech**  
Press Feeding Systems



**qs group**  
Integrated Industrial Automation

**saronni** s.p.a.



**ASSERVIMENTI**  
AL PRESSE

**NOVASTILMEC** S.p.A.  
Cm. Process of Equipment

**TIMAC**  
since 1975

# References Appliance

**FRANKE**

B/S/H/

 **Electrolux**

 **Whirlpool**

 **REGINOX**

 **smeg**

 **Indesit**

**bticino**

 **EPELL**  
soluzioni inossidabili

 **CM**

**ELKAY**

**AGA RANGEmaster**

**gorenje**group  
Gorenje GAIO, d.o.o.

**Amica**

 **arçelik**

**VESTEL**



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