

PLATFORMS



# HEXAGON

Thin film solutions in FanOut & Wafer Level Packaging



# Supporting your technology roadmap in FanOut and Wafer Level Packaging

We all want electronic devices that do more and cost less to buy and own... and packaging is key ...technology that enables smaller feature sizes, processes highly outgassing organic materials and drives down costs. The new HEXAGON simply gives you more when it comes to thin film processes for WLCSP and FanOut on 200 or 300mm.

## Choose the new HEXAGON for...

- Class leading  $R_c$
- Best throughputs
- Highest seed layer reliability
- Lowest consumable costs
- Longest kit lives
- Smallest footprint





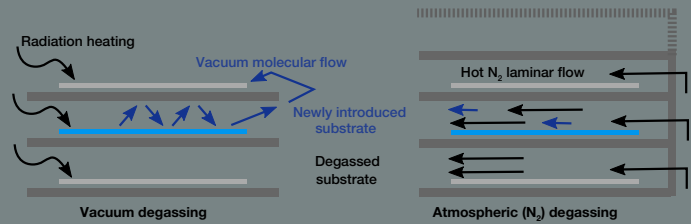
“Choose the new HEXAGON for the lowest cost of ownership”

# It begins with the right DEGAS technology...

From cassette to aligner and then degasser, Evatec's proven front end atmospheric handling robot with dual arm end effector delivers 200mm or 300mm substrates to the critical first step in their process journey. Atmospheric pressure degassing under N<sub>2</sub> laminar flow ensures precise substrate temperatures, enables efficient volatiles transport, and avoids the cross contamination seen with vacuum degas processes.

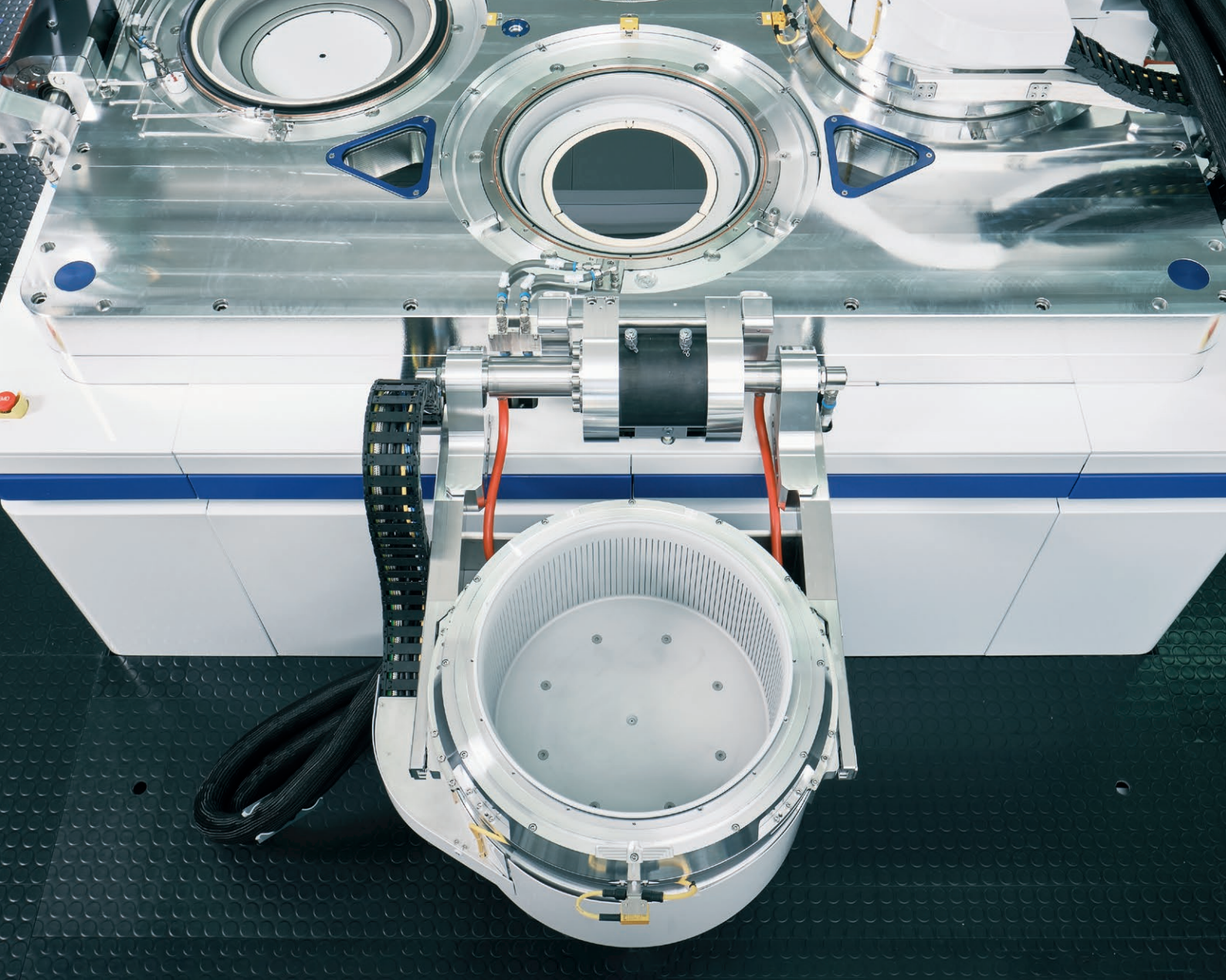
## “Atmospheric degas is key”

- Best temperature uniformity across the wafer
- Best repeatability
- Batch processing (up to 44 wafers) for best throughput
- Best degas efficiency



Basic comparison of batch degassing in vacuum and atmosphere. Desorped molecules are symbolized as blue vectors. Grey substrates are hot and degassed, blues ones are cold and not degassed.

Criteria	Vacuum Degassing	Atmospheric (N <sub>2</sub> ) degassing
Complexity	--	+
Scaling simplicity	-	+
Temperature control (overshoot & uniformity)	--	++
Influence of substrate emissivity	--	++
Cross contamination	--	++
Transport of volatiles	--	++



# It continues with enhanced ETCH technology...

Evatec's arctic etch technology with enhanced pumping performance and new "insitu pasting" reduces wafer pasting frequency and prepares the wafers for the lowest  $R_c$  in the industry after downstream metallization.

## "New generation Arctic etch sets the standard"

- Improved "within wafer" etch uniformities < 2%
- Longest kit life of >20,000 wafers



# ...and it ends with proven METALLIZATION technology

70 years of know how in PVD processes delivers deposition of metallic layers like Cu and Ti with outstanding uniformities and repeatabilities from targets with longer lives and low manufacturing costs. Optimized shield design facilities low particle counts and high power operation in daily production.

## “PVD technology that drives down costs”

- Longest target life
- Deposition uniformity better than 2%
- Reduced target costs per wafer

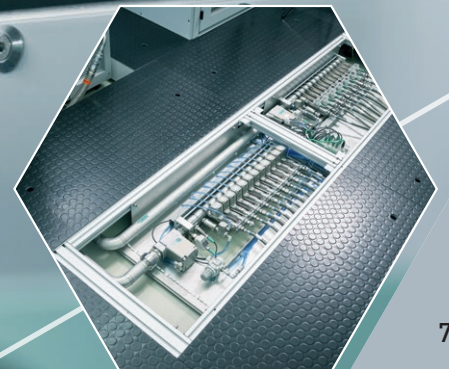
# A tool built for the production environment

**Flexible platform –  
configuration with  
up to 5 process stations**

**Easy maintenance with  
quick access to all  
tool areas & services**

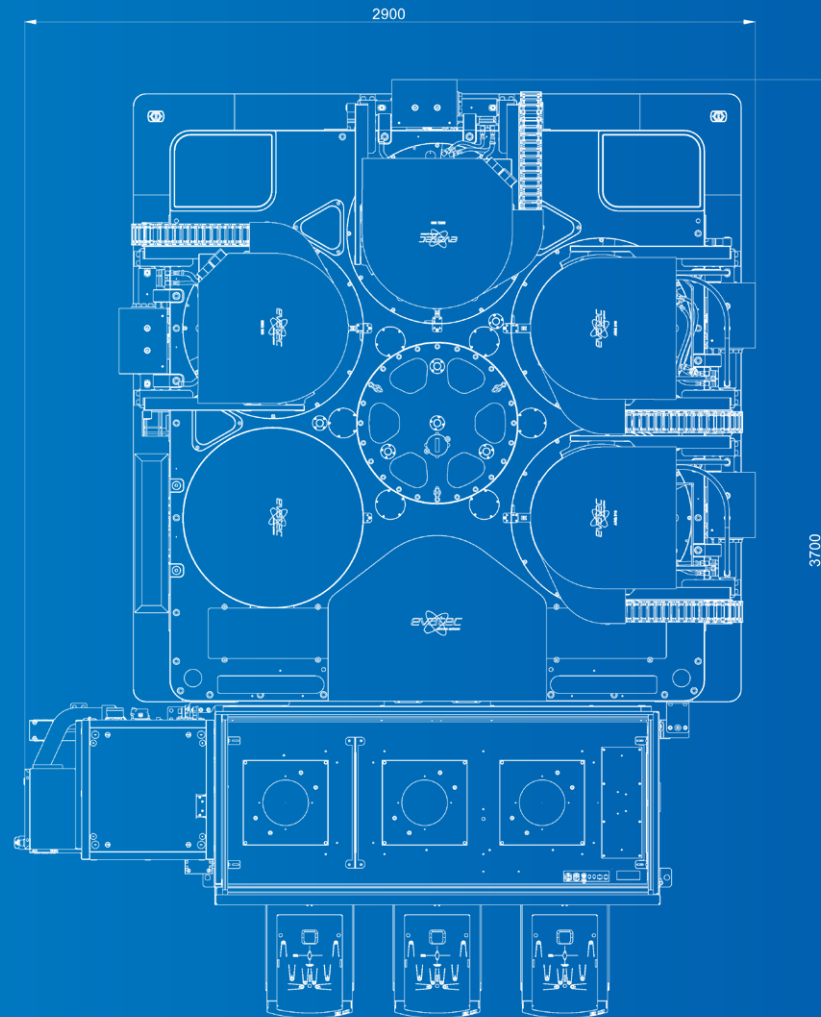
**Wafer Handling – up to 90 wafers  
per hour dry cycle time**

**Evatec XPERIENCE –  
Software that keeps you  
firmly in control**



# HEXAGON

HEXAGON is the ideal solution for processing of the latest generation ICs, organic passivated- or reconstituted (mold) wafers. Evatec is the market leader in UBM & RDL metallization.



## ABOUT EVATEC

Evatec offers complete solutions for thin film deposition and etch in the Advanced Packaging, Power Devices, MEMS, Wireless Communication, Optoelectronics and Photonics markets.

Our technology portfolio includes a range of advanced sputter technologies, plasma deposition & etch as well as standard and enhanced evaporation.

Our team is ready to offer process advice, sampling services and custom engineering to meet our customers individual needs in platforms from R&D to prototyping and true mass production.

We provide sales and service through our global network of local offices. For more information visit us at [www.evatecnet.com](http://www.evatecnet.com) or contact our head office.



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