

HDHF
gripper

**NEW HYGIENIC GRIPPER TECHNOLOGY
USING THE COANDA EFFECT
COANDA GRIPPER**





HDHF
gripper

HDHF

i Patented for gripping and holding delicate products of all kinds

10 YEARS
Development & Experience

BENEFITS

THE GRIPPING OF FOOD HAS NEVER BEEN SO SAFE AND SIMPLE

Maintenance and wear-free



Unaffected by dirt (particles, oil, grease) contaminants (particles, oils, greases)

High air leakage tolerance



For gripping permeable materials and rough surfaces

Simple Cleaning



Easy cleaning by CIP cleaning or in the dishwasher

Simple Implementation



Only adapters for robots and compressed air necessary

High Load capacity



Include range of capacity from 1g to 120 kgs

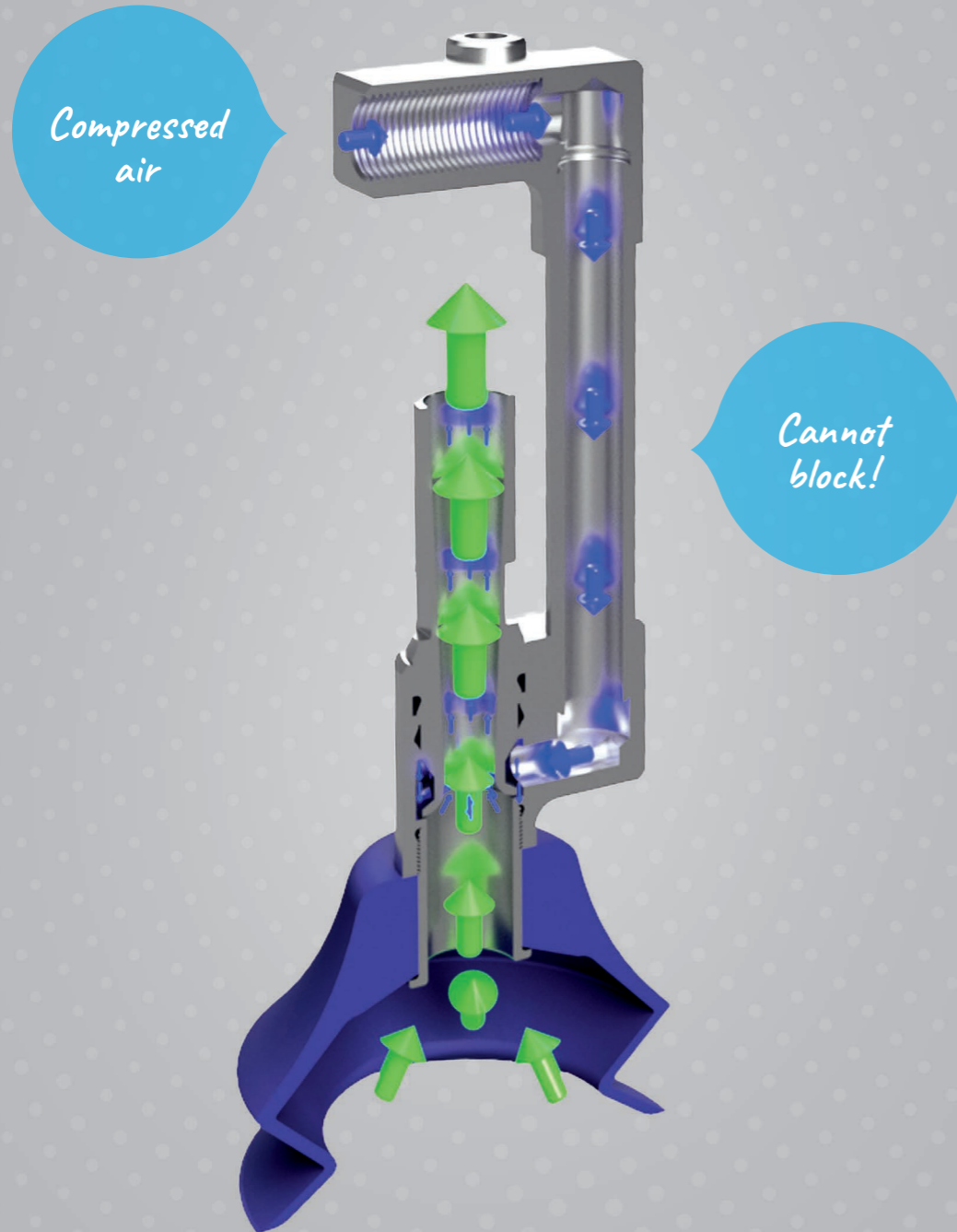
Contamination path ends after HDHF DM or HDHF D



Contamination distance less than 100 mm

PRINCIPLE OF OPERATION

THE INNOVATE TECHNOLOGY THE HDHF GRIPPING TECHNOLOGY



PRODUCT GROUPS



- 
Fish
- 
Meat
- 
Sliced products
- 
Vegetables
- 
Fruit
- 
Cheese
- 
Packaging
- 
Confectionary



*Pick & Place
made easy, even
for delicate
products*

LIFE CYCLE ASSESSMENT

COMPARISON OF OTHER GRIPPING SYSTEMS

In order to evaluate the HDHF gripping system, compared to other gripping systems a life cycle assessment was carried out. This shows an enormous increase in efficiency by using the HDHF instead of conventional vacuum technologies.

In addition to the improvement in the life cycle assessment, there are also economic advantages:






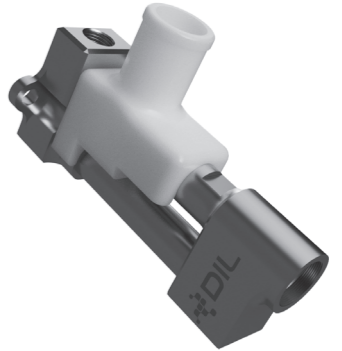
- 1 The construction of an HDHF has negligible environmental impacts compared to the construction of a side channel compressor or a rotary vane pump.
- 2 The cleaning of an HDHF causes only half the environmental impact of the CIP cleaning of a conventional vacuum generation system.
- 3 The cleaning of an HDHF can be done with a fraction of the water input of a CIP cleaning of conventional vacuum systems.
- 4 The HDHF can be a step towards sustainability for the food industry.

COANDA NOZZLE

HDHF Dm		HDHF D	
			
<p>Coanda nozzle for direct mounting with compressed air connection. High flexibility.</p> <ul style="list-style-type: none"> Compressed air consumption: 120 litres/min at 3.5 bar Operating pressure: 0 to 5 bar 		<p>Coanda nozzle for direct mounting with compressed air connection. Maximum leakage tolerance.</p> <ul style="list-style-type: none"> Compressed air consumption: 330 litres/min at 3.5 bar Operating pressure: 0 to 5 bar 	
Dimension	38 x 30 x 92 mm	Dimension	50 x 48 x 107 mm
Load capacity	0,5 g – 15 kg	Load capacity	0,5 g – 120 kg
Dead weight	180 g	Dead weight	510 g
Material	1.4571 – V4A	Material	1.4571 - V4A

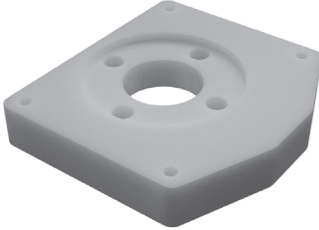


HDHF Cm		HDHF C	
			
<p>Plug-in coanda nozzle for flexible installation. Standard version with sealing rings.</p> <ul style="list-style-type: none"> 100 litres/min Compressed air consumption Operating pressure: 0 to 5 bar 		<p>Plug-in nozzle generator for flexible installation. Maximum air amplification for permeable products.</p> <ul style="list-style-type: none"> 300 litres/min Compressed air consumption Operating pressure: 0 to 5 bar 	
Dimension	18 x 18 x 51 mm	Dimension	32 x 32 x 55 mm
Load capacity	0,5 g – 15 kg	Load capacity	0,5 g – 120 kg
Dead weight	40 g	Dead weight	130 g
Material	1.4571 – V4A	Material	1.4571 - V4A

ADAPTER / ACCESSORIES FOR HDHF D AND Dm

Silencer		Quick coupler HDHF		Quick coupler HDHF grommet	
					
<p>Reduces noise pollution</p> <ul style="list-style-type: none"> Easy to clean Easy to install (snap-on) 		<p>Change gripper in a few simple steps</p> <ul style="list-style-type: none"> Safety sensor for correct seating Maintenance and cleaning without process downtime 		<p>Changing the suction bell in just a few steps</p> <ul style="list-style-type: none"> Twist-proof and easy to mount Available for all standard suction bells 	
Dimension	73 x 68 x 28 mm	Dimension	70 x 65 x 32 mm	Dimension	36 x 35 x 33 mm
Own weight	63 g	Own weight	130 g	Own weight	30 g
Material	POM, PVC	Material	POM, 1,4571 - V4A	Material	1.4112 stainless steel + POM
Solid metal baffle		Snap-on plastic impact plate		Hose adapter	
					
<p>Splash guard and exhaust air deflection</p> <ul style="list-style-type: none"> Easy to clean Firmly screwed to vacuum generator 		<p>Splash guard and exhaust air deflection</p> <ul style="list-style-type: none"> Easy to clean Easy to install (snap-on) 		<p>Controlled exhaust air discharge</p> <ul style="list-style-type: none"> Easy to clean Easy to install (snap-on) 	
Dimension	33 x 46 x 5 mm	Dimension	51 x 33 x 53 mm	Dimension	51 x 22 x 42 mm
Own weight	38 g	Own weight	18 g	Own weight	20 g
Material	1.4571 – V4A	Material	POM	Material	POM

Dimensions and weights are designed for the HDHF Dm!

ADAPTER / ACCESSORIES FOR HDHF D AND Dm

Robot adapter		Grommet/adapter for silicone suction cups		Adapter for plastic suction cups	
					
Adaptation to different robot models <ul style="list-style-type: none"> Can be adapted to the area of application and customisable Available in metal or plastic 		Standard component for silicone suction cups <ul style="list-style-type: none"> For attaching silicone suction cups Suction cup change possible 		Standard component for plastic suction bells <ul style="list-style-type: none"> For attaching plastic suction cups Suction cup change possible 	
Dimension	Adapter specific	Dimension	17 x 17 x 19 mm	Dimension	48 x 48 x 26 mm
Dead weight	Adapter specific	Own weight	8 g	Own weight	75 g
Material	POM or 1.4571 - V4A	Material	1.4571 - V4A	Material	1.4571 - V4A

Vacuum detector		Support bell for silicone suction cups		Silicone suction cup support	
					
Connection for vacuum detection and -measurement <ul style="list-style-type: none"> Easy to mount between suction bell and coanda generator Force regulation and counting mechanism adaptable 		Fixed end position for silicone suction cups <ul style="list-style-type: none"> Supports product position stability For fast robot movements 		Stiffener for silicone suction cups <ul style="list-style-type: none"> Secures the position on the suction cup Minimises deflection during fast movements and gripping marks 	
Dimension	51 x 33 x 53 mm	Dimension	suction cup specific	Dimension	suction cup specific
Own weight	18 g	Dead weight	suction cup specific	Dead weight	suction cup specific
Material	1.4571 - V4A	Material	POM or 1.4571 - V4A	Material	POM or 1.4571 - V4A

SILICONE SUCTION CUPS

Silicone cup 22 mm (suction cup)		Silicone cup 32 mm (suction cup)		Silicone cup 42 mm (suction cup)	
					
<ul style="list-style-type: none"> Silicone suction cup with soft lips for minimal imprints Durable and easy to clean 		<ul style="list-style-type: none"> Silicone suction cup with soft lips for minimal imprints Durable and easy to clean 		<ul style="list-style-type: none"> Silicone suction cup with soft lips for minimal imprints Durable and easy to clean 	
Dimension	22 x 22 x 15 mm	Dimension	32 x 32 x 30 mm	Dimension	42 x 42 x 30 mm
Own weight	5 g	Own weight	7 g	Own weight	10 g
Material	silicone	Material	silicone	Material	silicone

Silicone cup 52 mm (suction cup)		Silicone cup 75 mm (suction cup)		Silicone suction cup 30 x 70 mm (suction cup)	
					
<ul style="list-style-type: none"> Silicone suction cup with soft lips for minimal imprints Durable and easy to clean 		<ul style="list-style-type: none"> Silicone suction cup with soft lips for minimal imprints Durable and easy to clean 		<ul style="list-style-type: none"> Silicone suction cup with soft lips for minimal imprints Durable and easy to clean 	
Dimension	52 x 52 x 38 mm	Dimension	75 x 75 x 41 mm	Dimension	30 x 70 x 35 mm
Own weight	20 g	Own weight	25 g	Own weight	35 g
Material	silicone	Material	silicone	Material	silicone

All test materials are FDA-compliant.

SPECIAL FORMS OF SUCTION CUPS

Omelettes Suction Cup	D-Shape-suction cup	Box mould suction cup
		
		
<p>Enables the grasping of delicate pan pan products such as omelettes</p> <ul style="list-style-type: none"> Variable spacer Suitable for different pan depths Adaptable to pan diameter 	<p>For gripping D-shaped box goods</p> <ul style="list-style-type: none"> No clogging due to product residues Adaptable to different box shapes 	<p>For gripping elongated, box-shaped products</p> <ul style="list-style-type: none"> No clogging due to product residues Adaptable to different box shapes
<p>Dimension 190 x 200 x 79 mm</p> <p>Own weight 755 g</p> <p>Material POM or 1.4571 - V4A</p>	<p>Dimension 115 x 123 x 35 mm</p> <p>Own weight 160 g</p> <p>Material POM + silicone</p>	<p>Dimension 190 x 50 x 38 mm</p> <p>Own weight 185 g</p> <p>Material POM</p>
Cheese wheel suction bell	Chicory Suckers	Sponge cake base suction cup
		
		
<p>For gripping pieces and slices of cheese</p> <ul style="list-style-type: none"> Size and volume adjustable Prints and damage are prevented by supporting struts 	<p>For secure gripping and positioning of whole chicory heads</p> <ul style="list-style-type: none"> No damage to the foliage For chicory up to ø 60 mm 	<p>For gripping and positioning biscuit bases</p> <ul style="list-style-type: none"> Scalable to product size With integrated supports against impressions and bruising
<p>Dimension 83 x 210 x 45 mm</p> <p>Own weight 163 g</p> <p>Material POM</p>	<p>Dimension 60 x 100 x 50 mm</p> <p>Own weight 106 g</p> <p>Material POM</p>	<p>Dimension 250 x 250 x 27 mm</p> <p>Own weight 535 g</p> <p>Material POM</p>













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SPECIAL FORMS OF SUCTION CUPS

Meat Pieces Suction Cup	Chicken breast suction cup	Corncob Suction Cup
		
		
<p>For gripping large, bulky pieces of meat</p> <ul style="list-style-type: none"> Suitable for whole pieces of meat with or without bones Sturdy suction cup for a secure hold 	<p>For gripping chicken breast fillets with or without inner fillet</p> <ul style="list-style-type: none"> With silicone lips to prevent marks on the product Scalable to product size 	<p>For gripping and positioning corn cobs</p> <ul style="list-style-type: none"> Adaptable to corn cob size Maximum transport and holding security due to extra stable construction
<p>Dimension 140 x 140 x 120 mm</p> <p>Own weight 380 g</p> <p>Material POM</p>	<p>Dimension 130 x 50 x 32 mm</p> <p>Own weight 50 g</p> <p>Material silicone</p>	<p>Dimension 112 x 62 x 47 mm</p> <p>Own weight 180 g</p> <p>Material silicone</p>
Walnut Suction Cup	Pistachio Suction Cup	Suction cup for flat products
		
		
<p>For gripping and orienting walnuts</p> <ul style="list-style-type: none"> For decorating food Secure hold for precise placement 	<p>For gripping and orienting pistachios</p> <ul style="list-style-type: none"> For decorating food Secure hold for precise placement 	<p>For large products with a smooth surface</p> <ul style="list-style-type: none"> Flat products can be oriented and damage can be oriented and placed
<p>Dimension 23 x 17 x 23 mm</p> <p>Own weight 3 g</p> <p>Material POM</p>	<p>Dimension 9 x 9 x 19 mm</p> <p>Own weight 3 g</p> <p>Material POM</p>	<p>Dimension 70 x 280 x 31 mm</p> <p>Own weight 150 g</p> <p>Material POM</p>

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SPECIAL FORMS OF SUCTION CUPS

Avocado Suction Cup	Slice stacker	Multicap system																		
																				
																				
<p>For gripping and holding avocados</p> <ul style="list-style-type: none"> Suction cup with fixing effect for optimum holding force Transport protection due to fixed contact plate 	<p>For stacking sausage and cheese products</p> <ul style="list-style-type: none"> Suitable for all product sizes Clean separation of the slices possible 	<p>Variable system for multiple suction cups</p> <ul style="list-style-type: none"> Fast and safe transport of packaged products Equipped with standard suction bells 																		
<table border="1"> <tr><td>Dimension</td><td>100 x 73 x 76 mm</td></tr> <tr><td>Own weight</td><td>145 g</td></tr> <tr><td>Material</td><td>POM + silicone</td></tr> </table>	Dimension	100 x 73 x 76 mm	Own weight	145 g	Material	POM + silicone	<table border="1"> <tr><td>Dimension</td><td>100 x 100 x 64 mm</td></tr> <tr><td>Own weight</td><td>180 g</td></tr> <tr><td>Material</td><td>POM + 1.4571 - V4A</td></tr> </table>	Dimension	100 x 100 x 64 mm	Own weight	180 g	Material	POM + 1.4571 - V4A	<table border="1"> <tr><td>Dimension</td><td>100 x 55 x 200 mm</td></tr> <tr><td>Own weight</td><td>330 g</td></tr> <tr><td>Material</td><td>POM + silicone</td></tr> </table>	Dimension	100 x 55 x 200 mm	Own weight	330 g	Material	POM + silicone
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Meat slice suction bell	Silicone suction cup 200 mm (suction cup)	Silicone suction cup 114 mm (suction cup)																		
																				
																				
<p>For holding thin slices of meat</p> <ul style="list-style-type: none"> Can be used for all disc sizes High flexibility towards different products 	<p>Load suction bell for large products</p> <ul style="list-style-type: none"> Standard suction bell with stable base plate For cartons, cheese wheels or pork legs 	<p>Load suction bell for large products</p> <ul style="list-style-type: none"> Standard suction bell with stable base plate For cartons, cheese wheels or pork legs 																		
<table border="1"> <tr><td>Dimension</td><td>150 x 120 x 59 mm</td></tr> <tr><td>Own weight</td><td>505 g</td></tr> <tr><td>Material</td><td>POM + 1.4571 - V4A</td></tr> </table>	Dimension	150 x 120 x 59 mm	Own weight	505 g	Material	POM + 1.4571 - V4A	<table border="1"> <tr><td>Dimension</td><td>200 x 200 x 55 mm</td></tr> <tr><td>Own weight</td><td>790 g</td></tr> <tr><td>Material</td><td>silicone</td></tr> </table>	Dimension	200 x 200 x 55 mm	Own weight	790 g	Material	silicone	<table border="1"> <tr><td>Dimension</td><td>114 x 114 x 62 mm</td></tr> <tr><td>Own weight</td><td>245 g</td></tr> <tr><td>Material</td><td>silicone</td></tr> </table>	Dimension	114 x 114 x 62 mm	Own weight	245 g	Material	silicone
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AWARD

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EXCELLENT GRIPPING TECHNIQUES



HDHF
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