

**The world's largest producer of seawater resistant aluminium air pipe heads  
with more than 60 years of experience**



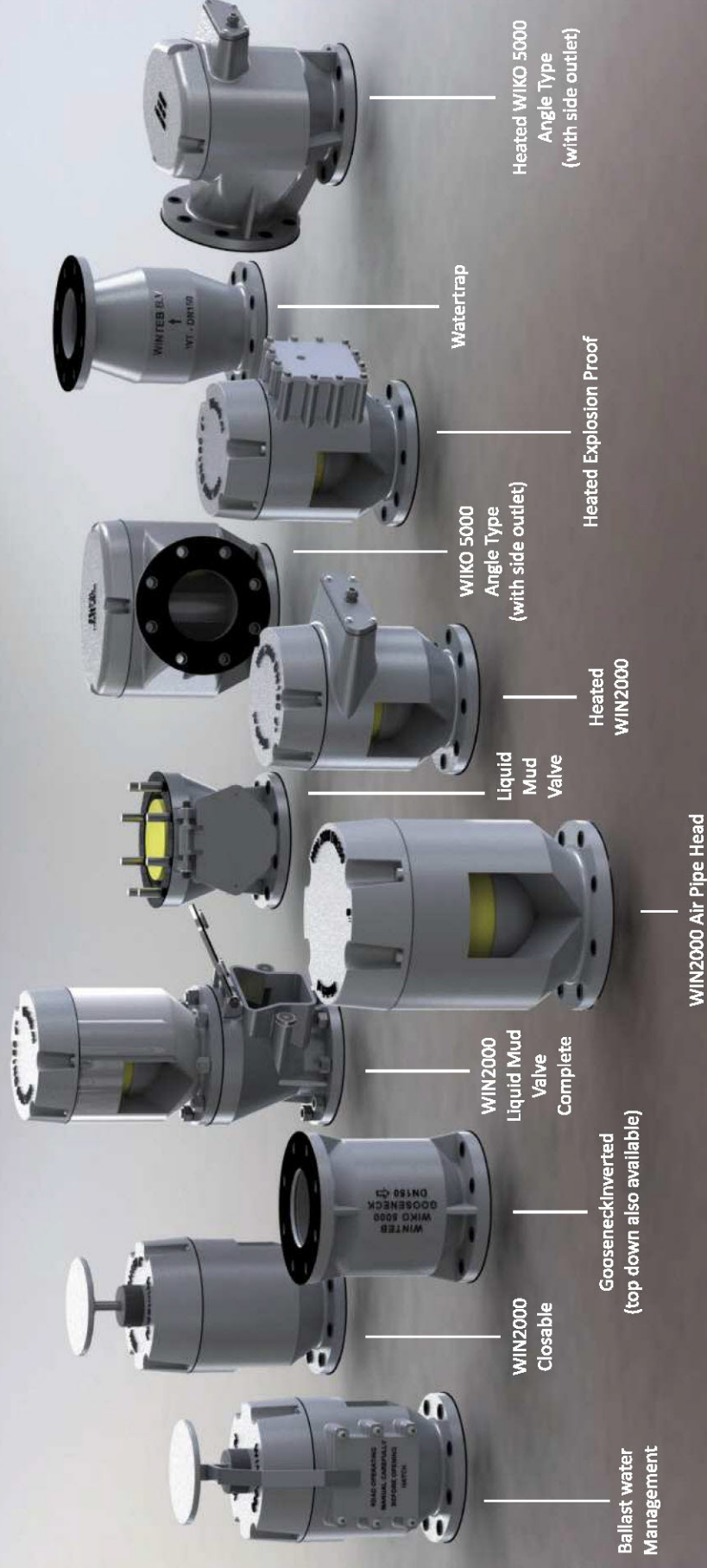
**The new standard by**

**winteb**  
Established in 1952



**Made of seawater resistant Aluminium DIN1725 | Non corroding | Maintenance free | Smallest design in the world  
Cost saving | light weight = less fuel = less CO2 emission | Approved by all major classification societies  
Highest inlet air speed (no suction blocking) due to patented HIAS technology | High volumetric flow**

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Innovative and high quality products



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### The WIN2000 series

In 2000 Winteb developed the revolutionary WIN2000 air pipe head series, produced out of seawater resistant aluminium, which has a space and weight saving design that is revolutionary, enabling you to fit them in places where they do not form an obstacle. In fact, Winteb provides the smallest design in the world!

Throughout the years the WIN2000 series has proven to be a very tough design. Where air pipe heads made of cast iron, welded hot dipped iron/steel or stainless steel constructions of our competitors, corrode and have to be replaced, our aluminium products last for more than 20 years! Our product is extremely long lasting and will pay off in the long term because of the low replacement and maintenance costs.

### New design

Because of its volumetric design we have achieved an on average higher volumetric flow. Especially the larger sizes have a phenomenal volumetric flow. Both the WIKO 5000 and the WIN2000 series use an O-ring sealed retaining ring, which, together with the PE ball, provides the best possible leakage protection. Despite this phenomenal volumetric flow, in some

cases forces were acting beyond us and caused suction blocking. This mostly occurs when used on stability tanks, which have an enormous pump capacity and excessively high inlet air speeds, while operating on rough seas.

### The HIAS technology

Being known for their innovative character Winteb quickly started to work on a solution and came up with the HIAS design. Please see below graphics for more information. Since the knowledge and experience is kept under one roof, Winteb can easily adapt to such demands in the maritime market and fulfill the needs and wants of their customers. As for this new model, the development, design, casting, production, testing, machining, marketing and sales were all performed by Winteb. Results are astonishing and with this execution, even severe circumstances can be faced. The patented HIAS technology has increased the maximum inlet air speed by a factor 4, which results into inlet air speeds of 40 m/s and higher!

This innovation proves again that 60 years of experience, makes a flexible, innovative and high quality company, which offers customer based solutions.

## CURRENT VERSION

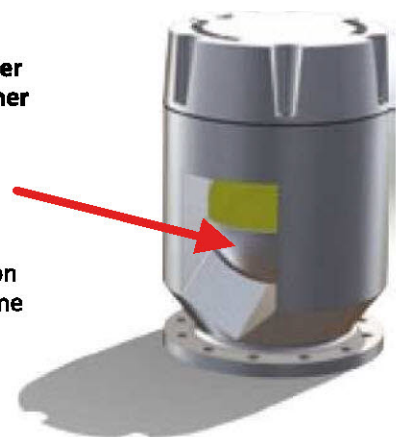


## HIGH INLET AIR SPEED EXECUTION PATENT PENDING

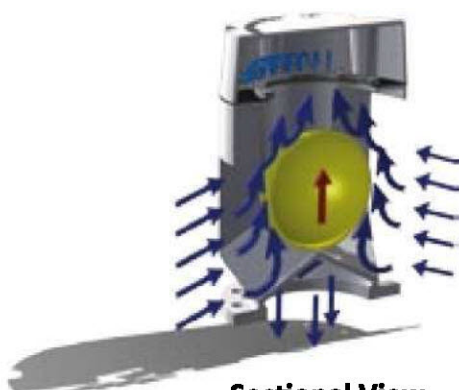
**Optimized Ball-Chamber and inlet ports for higher airspeeds:**

The Ball rests in a 360° Chamber

Outside- and installation dimensions are the same as the current version



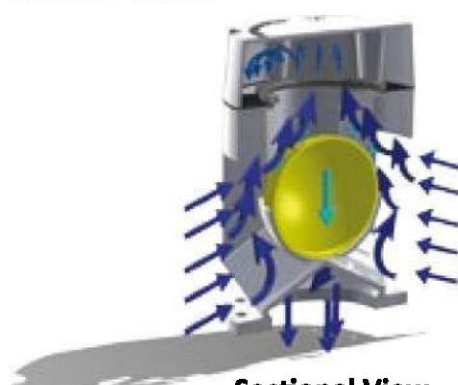
## CURRENT VERSION



**Sectional View**  
*Airflow visualisation*

Due to the airflow around almost the entire ball, the lift effect on the ball by the airflow, will be relatively high when used on e.g. stability tanks with excessively high airspeeds. The resulting force of the airflow onto the ball will mainly be directed upwards (red arrow).

## HIGH INLET AIR SPEED EXECUTION PATENT PENDING



**Sectional View**  
*Airflow visualisation*

The airflow is deflected from the lower half of the ball: even at high airspeeds, there will be almost no lift effect on the ball by the airflow. The resulting force of the airflow onto the ball will mainly be directed downwards (light blue arrow).



Established in 1952

THE ORIGINAL

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## WINTEB BV PROUDLY PRESENTS: THE **H**IGH **I**NLET **A**IR **S**PEED EXECUTION **HIAS**

**Suction blocking is history  
with Winteb's **HIAS**!**

The patented HIAS technology has  
increased the maximum inlet air  
speed by a factor 4!

Even on tanks with  
excessively high inlet air speeds,  
the WIN2000 HIAS Air Pipe Head will  
still do its job!



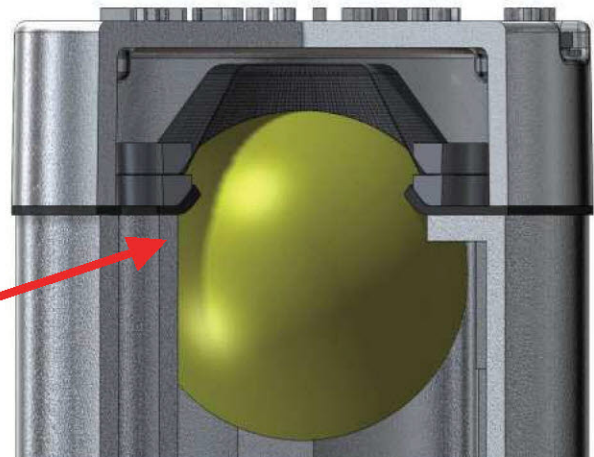
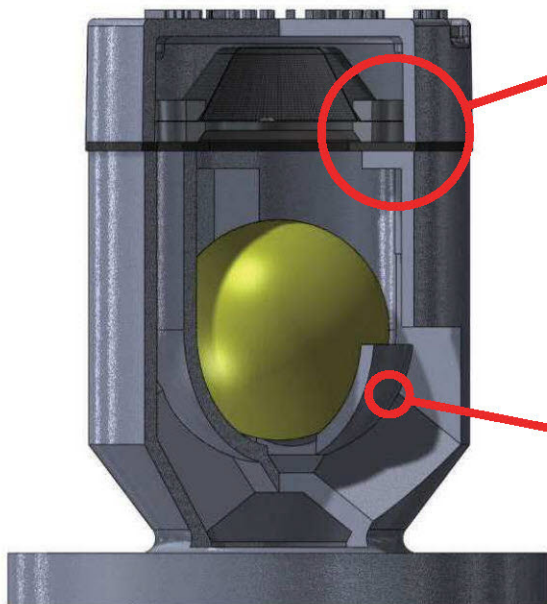
**HIAS**

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**THE BEST CAN GET BETTER!**  
**PATENTED HIAS TECHNOLOGY (NR 2010510)**  
**+**  
**IMPROVED LEAKAGE PROTECTION**  
**=**  
**HIAS 2.0**

**BENEFIT FROM  
THE BEST:**



Traditional O-ring sealing replaced by simplified sealing solution. Resulting in:

1. Less spare parts
2. Saving of costs
3. Even better leakage protection

**HIAS TECHNOLOGY (Patent nr 2010510)**

The Ball rests in a 360° Chamber, which results in:

4. Inlet air speeds of 40 m/s and higher!
5. No more suction blocking
6. Anti Splash function
7. Anti Noise function

**THE NEW STANDARD BY WINTEB AVAILABLE IN THE COURSE OF 2014**

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## WINTEB SETS A NEW STANDARD IN AIR VENTING! **PATENTED HIAS TECHNOLOGY** (PATENT NR 2010510)

### CURRENT VERSION



### HIGH INLET AIR SPEED EXECUTION

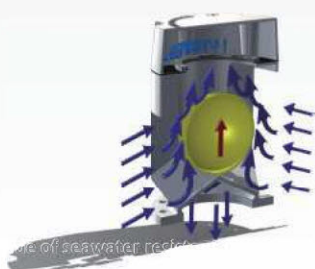
Optimized Ball-Chamber and Inlet ports for higher airspeeds:

The Ball rests in a 360° Chamber

Outside- and installation dimensions are the same as the current version



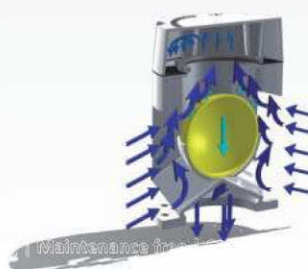
### CURRENT VERSION



#### Sectional View Airflow visualisation

Due to the airflow around almost the entire ball, the lift effect on the ball by the airflow, will be relatively high when used on e.g. stability tanks with excessively high airspeeds. The resulting force of the airflow onto the ball will mainly be directed upwards (red arrow).

### HIGH INLET AIR SPEED EXECUTION



#### Sectional View Airflow visualisation

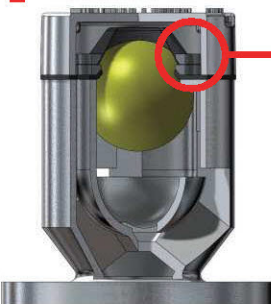
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### IMPROVED LEAKAGE PROTECTION:

1



2



3



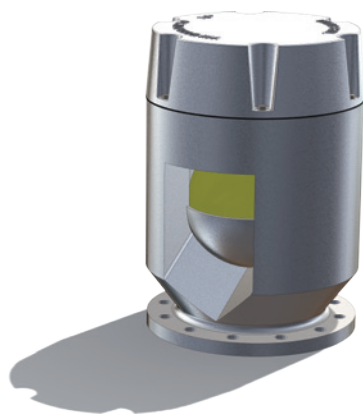
#### New Sealing

When water hits the ball, the floatball lifts and shuts the valve (1,2). No leakage will occur (3), because the sealing moves itself around the floatball and prevents water coming into the pipe.

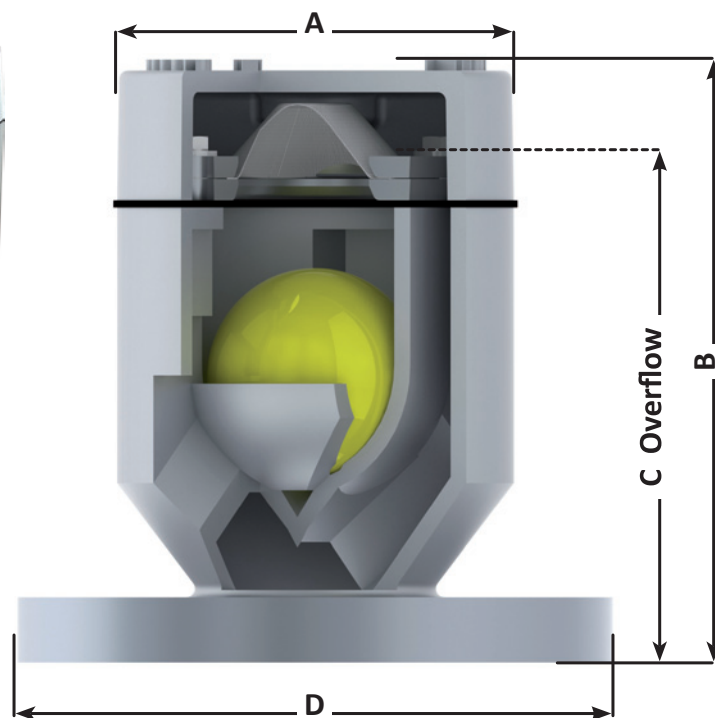
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WINTEB BV PROUDLY PRESENTS:  
THE **HIGH INLET AIR SPEED EXECUTION**  
**HIAS**



The patented HIAS technology has significantly increased the maximum inlet air speed. Especially designed for stability tanks and anti-heeling tanks.



**Options:**

1. Closing device
2. Screen
3. Threaded connection, only for aluminium pipes.
4. Powder (epoxy) coating
5. Sounding pipe
6. Small flange connection

WIN2000 HIAS WITH SCREEN (screen is optional)

	DN50 (2")	DN65 (2½")	DN80 (3")	DN100 (4")	DN125 (5")	DN150 (6")	DN175 (7")	DN200 (8")	DN250 (10")	DN300 (12")	DN350 (14")	DN400 (16")	DN450 (18")	DN500 (20")
<b>A</b>	Ø108	Ø130	Ø160	Ø195	Ø235	Ø275	Ø275	Ø340	Ø415	Ø560	Ø642	Ø725	Ø740	Ø887
<b>B ±2.5</b>	165	200	230	270	319	376	376	477	592	742	858	956	1110	956
<b>C Overflow</b>	146	175	200	234	272	319	319	392	490	619	716	779	925	873
<b>D</b>	Flange connection according to any standard													
<b>Ball diameter</b>	Ø60	Ø75	Ø90	Ø105	Ø130	Ø155	Ø155	Ø200	Ø250	Ø325	Ø360	Ø400	Ø480	Ø500
<b>Weight kg.</b>	2	2.75	3.75	6	8.5	12	13	19.5	31	63	88	114	134	180
<b>Flow rate at 0,25 bar (m3/h)*</b>	23	34	57	102	128	204	210	340	450	775	1025	1300	1490	2100
<b>Flow rate at 0,25 bar (m3/h)**</b>	19	33	52	78	116	188	195	273	405	705	925	1175	1375	1900
<b>Max. inlet air speed (m/s)</b>	17	17.5	38	58	59	42	42	27	15	39	36	27	34	29
<b>Inlet air flow rate at max. inlet air speed (m3/h)</b>	135	209	612	1620	2590	2700	2700	3060	2700	9900	12240	12060	19080	20880

\* Please note that these values correspond with the WIN2000 HIAS **without screen**, flowrate is with water being pumped through the air pipe head.

\*\* Please note that these values correspond with the WIN2000 HIAS **with screen mesh 18**, flowrate is with water being pumped through the air pipe head.

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