

The world's largest producer of seawater resistant aluminium air pipe heads  
Innovative and high quality products



the new standard by



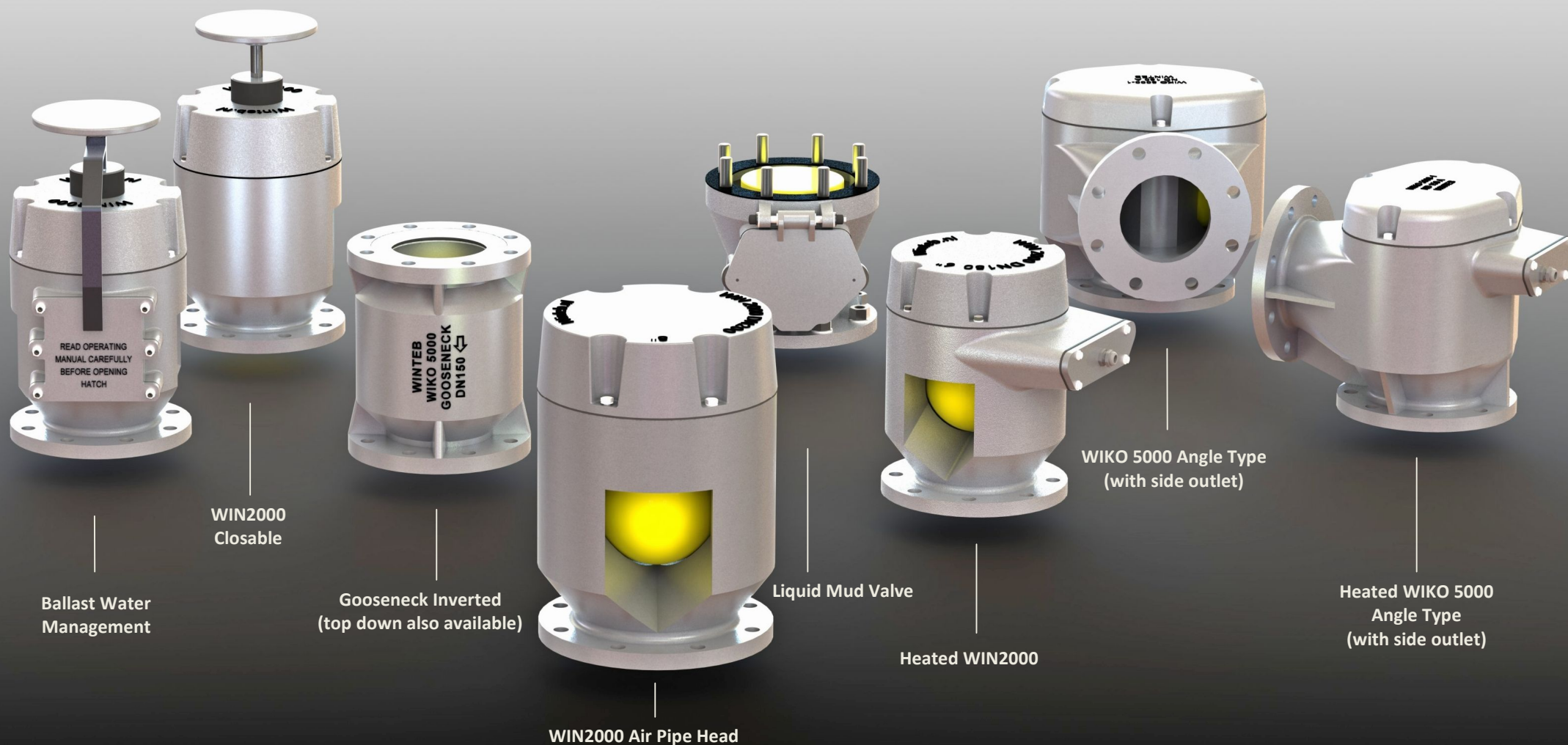
**winteb**

Established in 1952



Made of seawater resistant Aluminium DIN1725 | Non corroding | Maintenance free | Smallest design available  
Cost saving | light weight = less fuel = less CO2 emission | Approved by all major classification societies  
For more information and a complete overview of our product range, please check [www.winteb.com](http://www.winteb.com)

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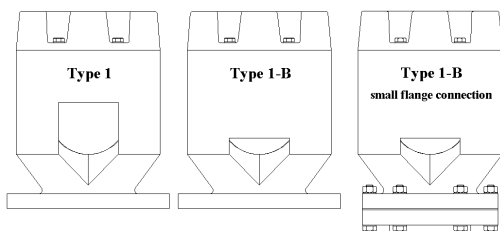


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Options:

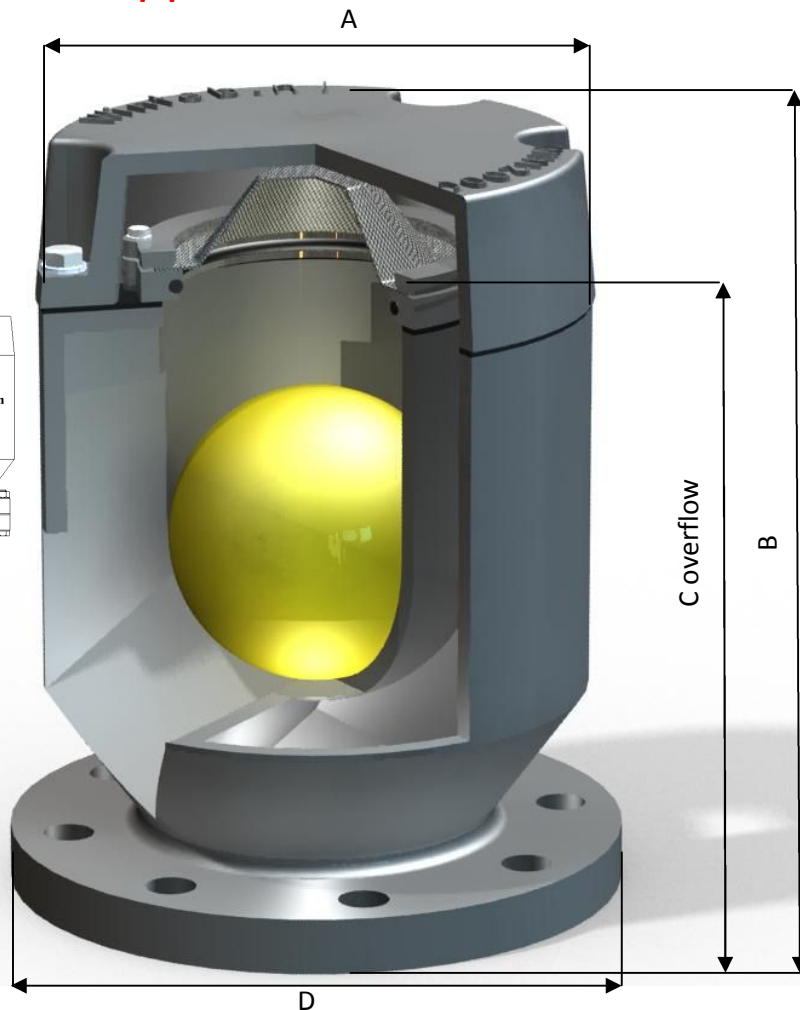
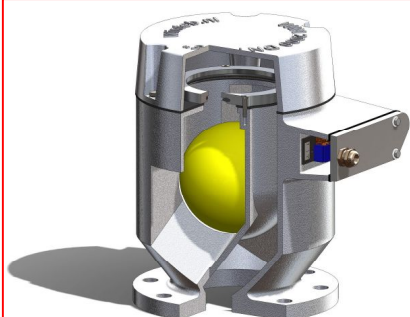
1. Closing device
2. Screen
3. Threaded connection, only for aluminium pipes.
4. Powder (epoxy) coating
5. Sounding pipe
6. Small flange connection
7. Vacuum Breaker
8. Anti splash water type (Type 1B, DN50-DN125, recommended for fuel tanks)

WIN2000 Air pipe heads



Type 1B (DN50-DN125)  
Anti Splash water type  
Recommended for fuel tanks

WIN2000 Air Pipe Head:  
Also available with de-icing system



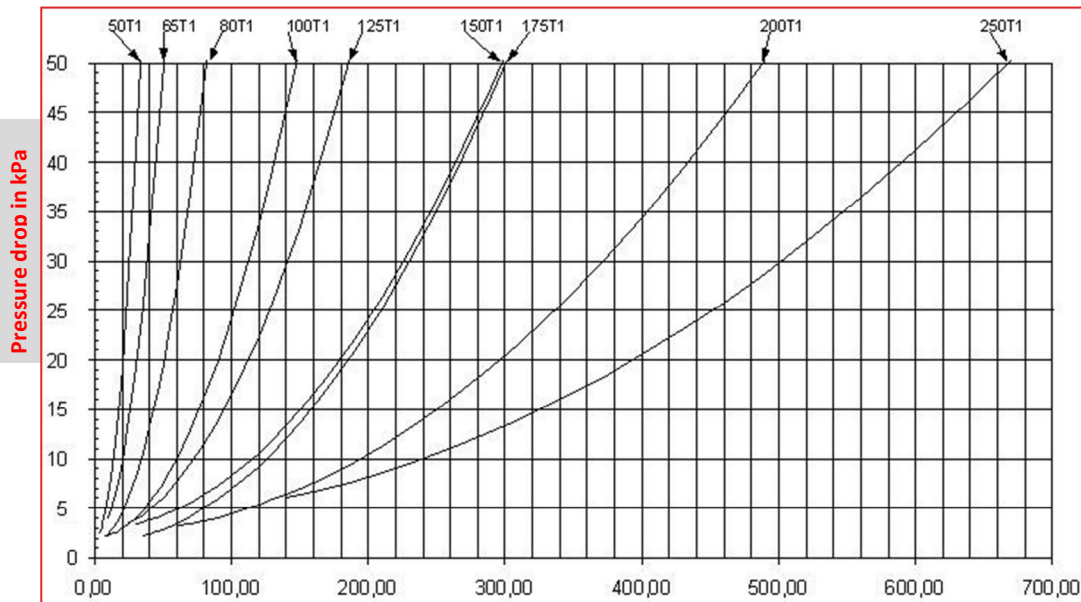
Type 1 with screen (screen is optional)

	DN50 (2")	DN65 (2 1/2")	DN80 (3")	DN100 (4")	DN125 (5")	DN150 (6")	DN175 (7")	DN200 (8")	DN250 (10")	DN300 (12")	DN350 (14")	DN400 (16")	DN450 (18")
A	Ø108	Ø130	Ø160	Ø195	Ø235	Ø275	Ø275	Ø340	Ø415	Ø560	Ø642	Ø725	Ø740
B ±2.5	161	200	226	265	320	372	372	470	593	741	842	950	1110
C Overflow	136	168	190	226	262	312	312	385	478	595	675	760	925
D	Flange connection according to any standard												
Ball diameter	Ø60	Ø75	Ø90	Ø105	Ø130	Ø155	Ø155	Ø200	Ø250	Ø325	Ø360	Ø400	Ø480
Weight kg.	2	2.75	3.75	6	8.5	12	13	19.5	31	63	88	114	134
Flow rate at 0,25 bar(m3/h)*	23	34	57	102	128	204	210	340	450	775	940	1250	1800
Flow rate at 0,25 bar(m3/h) **	19	33	52	78	116	188	195	273	405	705	896	1095	
Max. inlet air speed (m/s)	11	9.5	10	8	9.5	10	8.5	10	9.5	15	19	20.5	15.5
Inlet air flow rate at max. inlet air speed (m3/h)	72	115	180	216	432	665	720	1080	1700	3780	6500	8100	9000

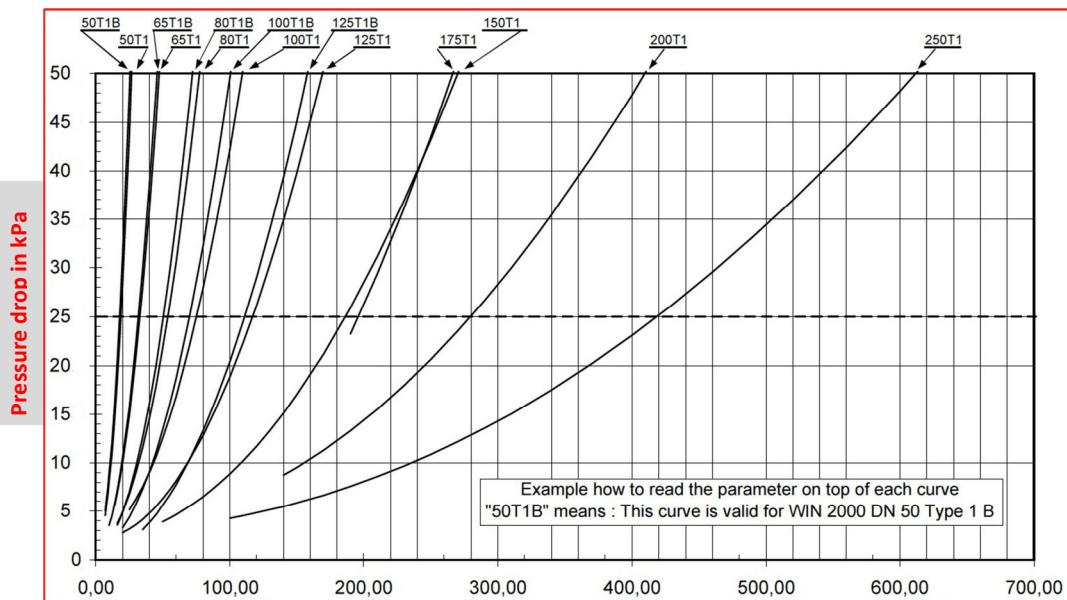
\*Please note that these values correspond with the WIN2000 Type 1 without screen, flowrate is with water being pumped through the air pipe head.

\*\*Please note that these values correspond with the WIN2000 Type 1 with screen mesh 18, flowrate is with water being pumped through the air pipe head.  
See reverse side for complete flowcurves.

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WIN2000 type 1 without screen sizes DN50-250

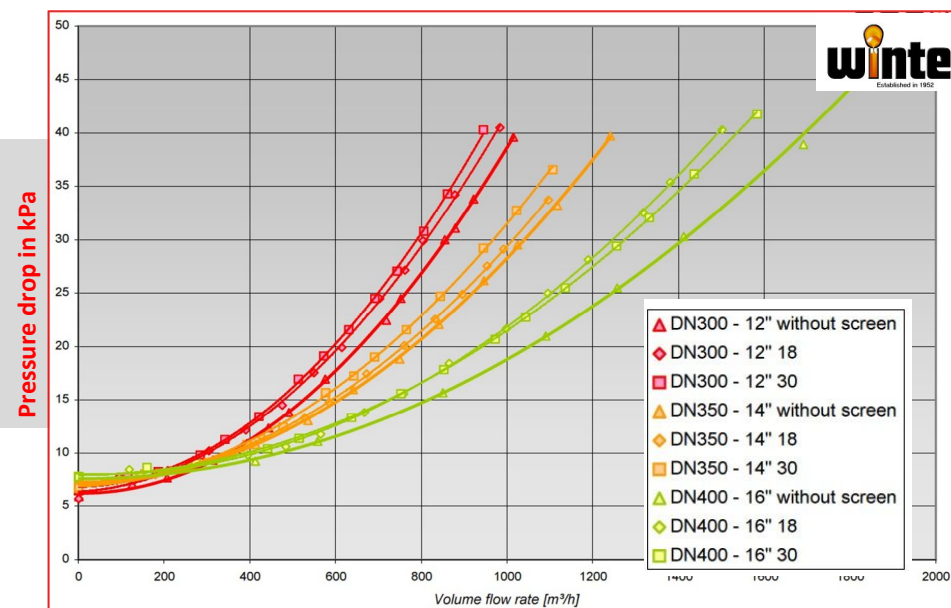


WIN2000 type 1 with screen mesh18 sizes DN50-250  
type 1-B with screen mesh18 sizes DN50-125

## WIN2000 Air Pipe Heads: Pressure drop vs. Flow rate Characteristics

According to classification societies the air pipe head characteristic curves are to be taken into consideration at the design stage of the ballast system.

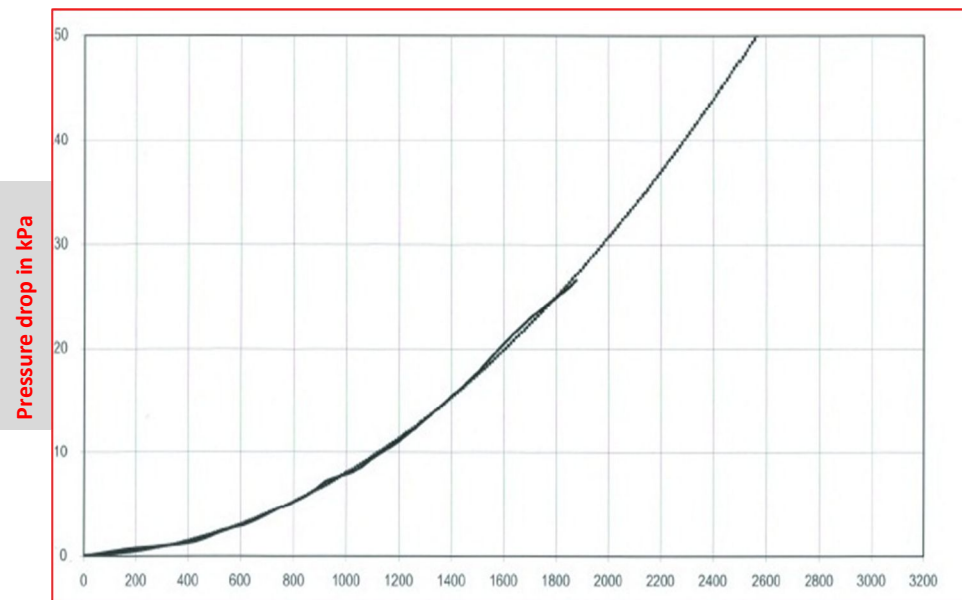
Flowrate in m<sup>3</sup>/h



WIN2000 type 1 without screen sizes DN300-400

WIN2000 type 1 with screen mesh18 sizes DN300-400

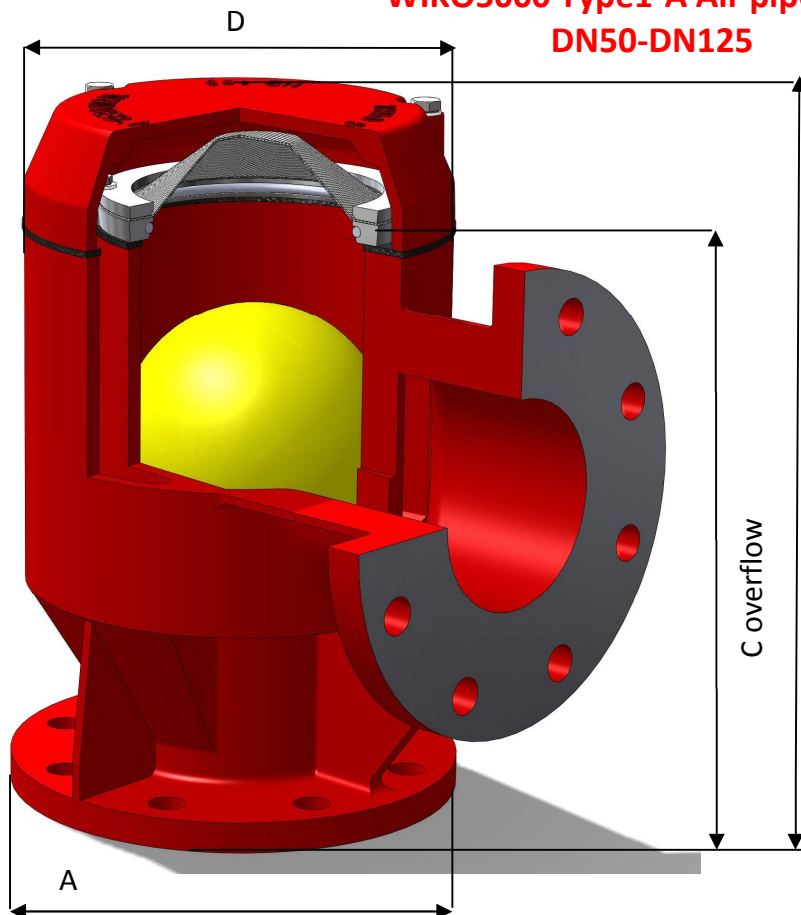
WIN2000 type 1 with screen mesh30 sizes DN300-400



WIN2000 type 1 without screen size DN450

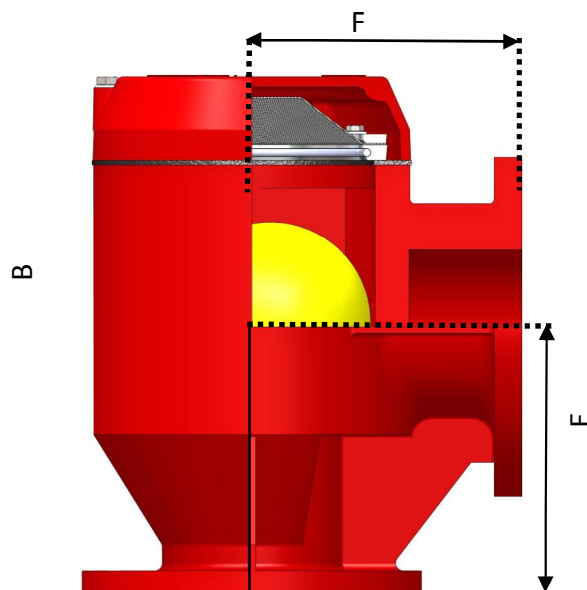
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## WIKO5000 Type1-A Air pipe heads DN50-DN125



### Options:

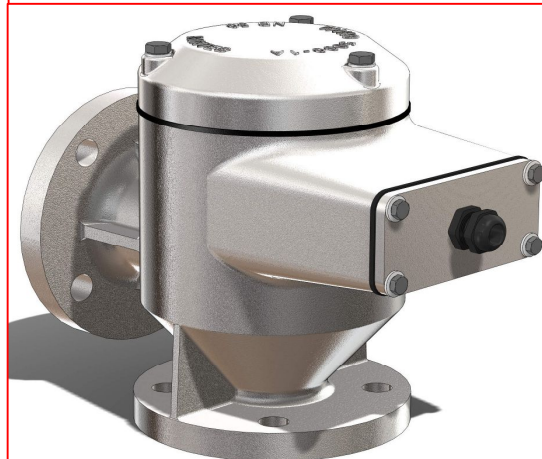
1. Screen
2. Sounding pipe
3. Closing device
4. Vacuum Breaker



**WIKO5000 Type 1A Air Pipe Head:**  
Also available in de-icing system  
Picture below shows a  
WIKO5000 Type 1A DN50 with de-icing system

	DN50 (2")	DN65 (2 1/2")	DN80 (3")	DN100 (4")	DN125 (5")
A	Flange connections according to international standards				
B ±2.5	240	240	240	335	335
C Overflow	210	210	210	260	260
D	Ø156	Ø156	Ø156	Ø205	Ø205
E	105	112.5	122.5	170	170
F	130	130	130	175	175
Ball diameter	Ø60	Ø75	Ø90	Ø105	Ø130
Weight kg.	4.5	5	6	10	12
Flow rate at 0,25 bar(m3/h)*	28.7	31.4	35.7	72.6	76.9
Max. inlet air speed (m/s)	16.5	10	7	10	8.5
Inlet air flow rate at max. inlet air speed (m3/h)	108	126	129	288	396

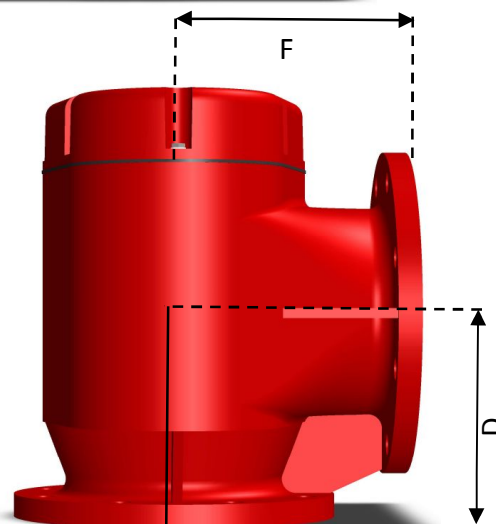
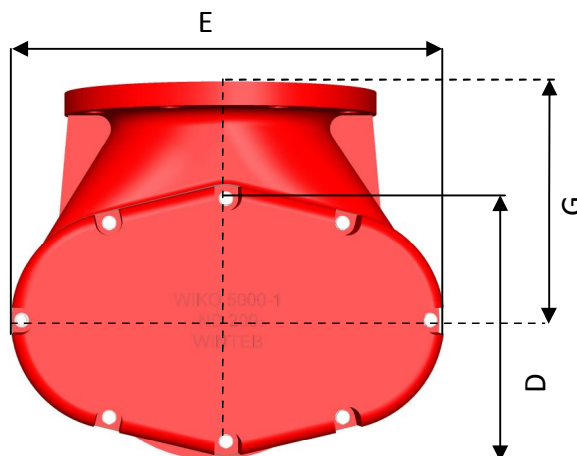
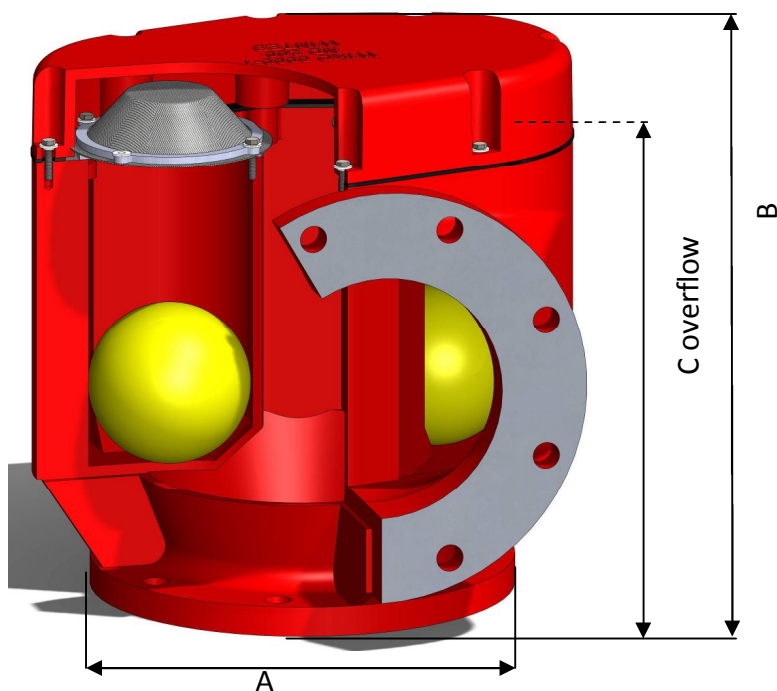
\*Please note that these values correspond with the WIN2000 Type 1 with screen mesh 18, flowrate is with water being pumped through the air pipe head



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**WIKO5000 Type1-A Air pipe heads  
DN150-DN400**



	DN150 (6")	DN175 (7")	DN200 (8")	DN250 (10")	DN300 (12")	DN350 (14")	DN400 (16")
<b>A</b>	Flange connections according to international standards						
<b>B ±2.5</b>	365	365	430	430	565	565	565
<b>D Overflow</b>	320	320	375	375	465	465	465
<b>E</b>	375	375	440	440	610	610	610
<b>F</b>	190	202.5	215	230	270	295	270
<b>G</b>	245	245	245	245	350	350	350
<b>Ball diameter</b>	Ø130	Ø130	Ø130	Ø130	Ø240	Ø240	Ø240
<b>Weight kg.</b>	22	25	30	32	55	57	60
<b>Flow rate at 0,25 bar(m3/h)*</b>	151.8	151.8	257.7	265.6	510.5	506.3	514.3
<b>Max. inlet air speed (m/s)</b>	14	14	14	11	15	9.5	10
<b>Inlet air flow rate at max. inlet air speed (m3/h)</b>	900	900	1530	2052	3780	3420	4320

\*Please note that these values correspond with the WIN2000 Type 1 with screen mesh 18, flowrate is with water being pumped through the air pipe head

**WIKO5000 Type 1A Air Pipe Head:**  
Also available in de-icing system  
Picture below shows a WIKO5000 Type 1A DN200 with de-icing system

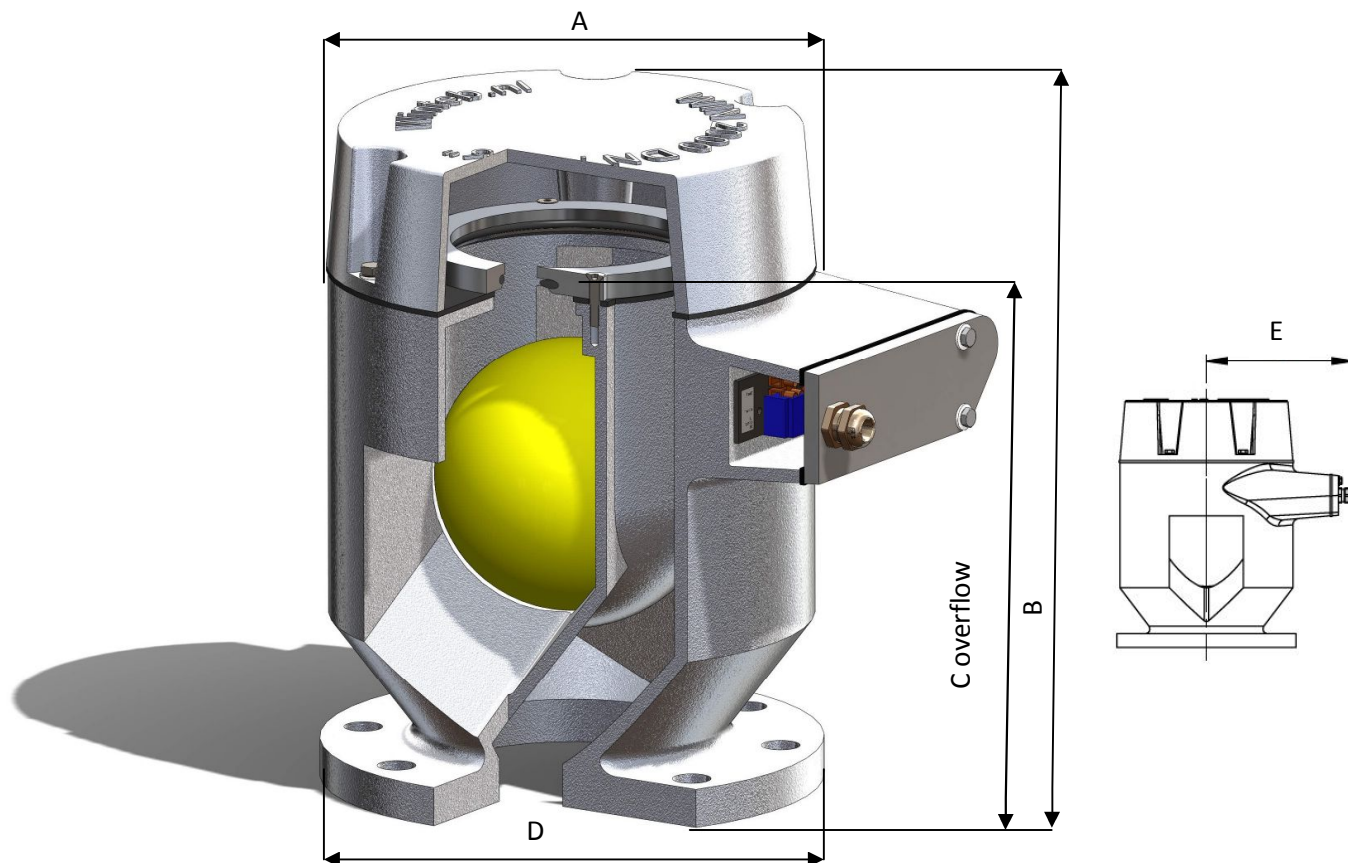


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## WIN2000 Heated air pipe head

Face the cold with Winteb's heated Air Pipe Heads



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A	Ø108	Ø130	Ø160	Ø195	Ø235	Ø275	Ø275	Ø340	Ø415	Ø562	Ø642	Ø722	Ø740
B ±2.5	161	195	226	265	313	372	372	470	576	741	842	940	1110
C Overflow	136	165	190	223	260	305	305	382	464	585	675	737	925
D	Flange connection according to any standard												
E	145	165	180	189	204	229	229	271	311	388	428	478	528
Ball diameter	Ø60	Ø75	Ø90	Ø105	Ø130	Ø155	Ø155	Ø200	Ø250	Ø325	Ø360	Ø400	Ø480
Weight kg.	3.25	3.75	5	7.5	10	14.25	14.25	22.5	35	72	95	119	140
Power (w)	125	125	125	250	250	250	250	400	800	2000	3000	3600	4000
Flow rate at 0,25 bar(m3/h)*	23	34	57	102	128	204	210	340	450	775	940	1250	1800
Flow rate at 0,25 bar(m3/h) **	19	33	52	78	116	188	195	273	405	705	896	1095	
Max. inlet air speed (m/s)	11	9.5	10	8	9.5	10	8.5	10	9.5	15	19	20.5	15.5
Inlet air flow rate at max. inlet air speed (m3/h)	72	115	180	216	432	665	720	1080	1700	3780	6500	8100	9000

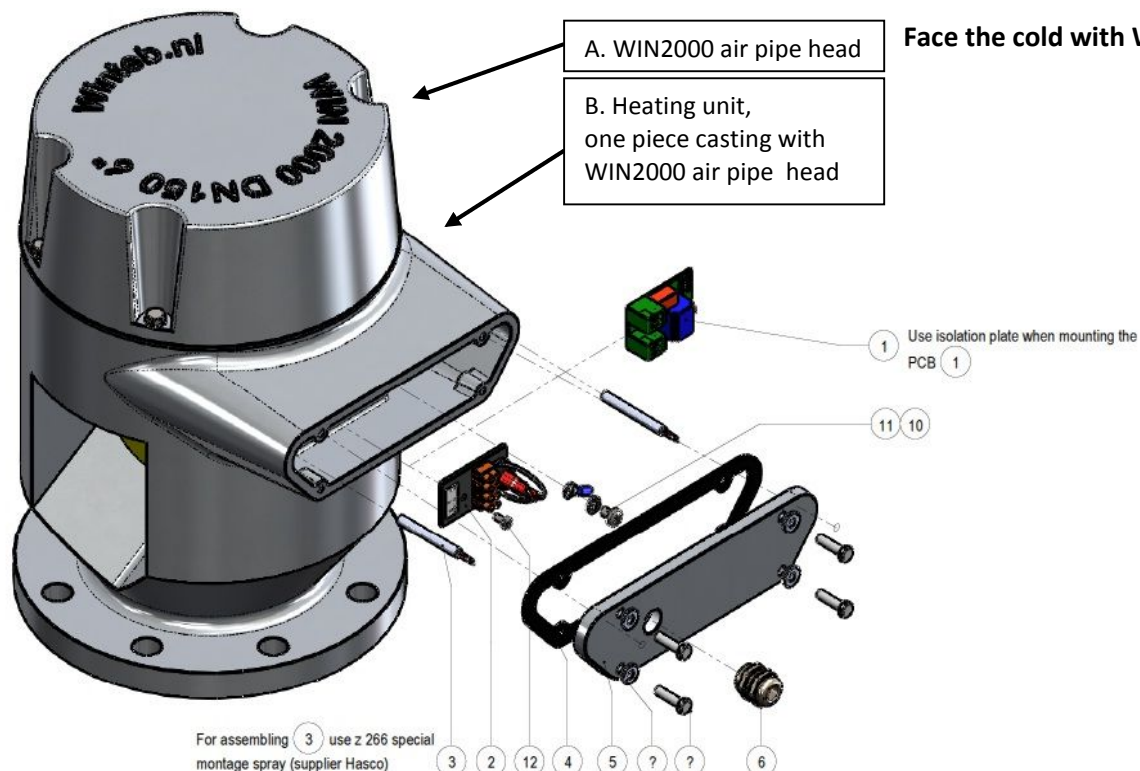
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\*\*Please note that these values correspond with the WIN2000 Type 1 with screen mesh 18, flowrate is with water being pumped through the air pipe head.

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## WIN2000 Heated air pipe head

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Posnr.	Description	Material
1	Automatic Thermostat	-
2	Non automatic Thermostat	-
3	Heater	-
4	Gasket	Neoprene
5	Cover	Seawater Res. Al DIN 1725
6	Cable screw gland: HSK-M M20x1.5 LT 6-12MM	Nickel plated brass
7	Isolation sleeve	Nylon -6
8	Hex head screw DIN933	A4
9	Knurled washer DIN 6798 A	A4
10	Pan head cross DIN 7985	A4
11	Pan head cross DIN 7985	A4

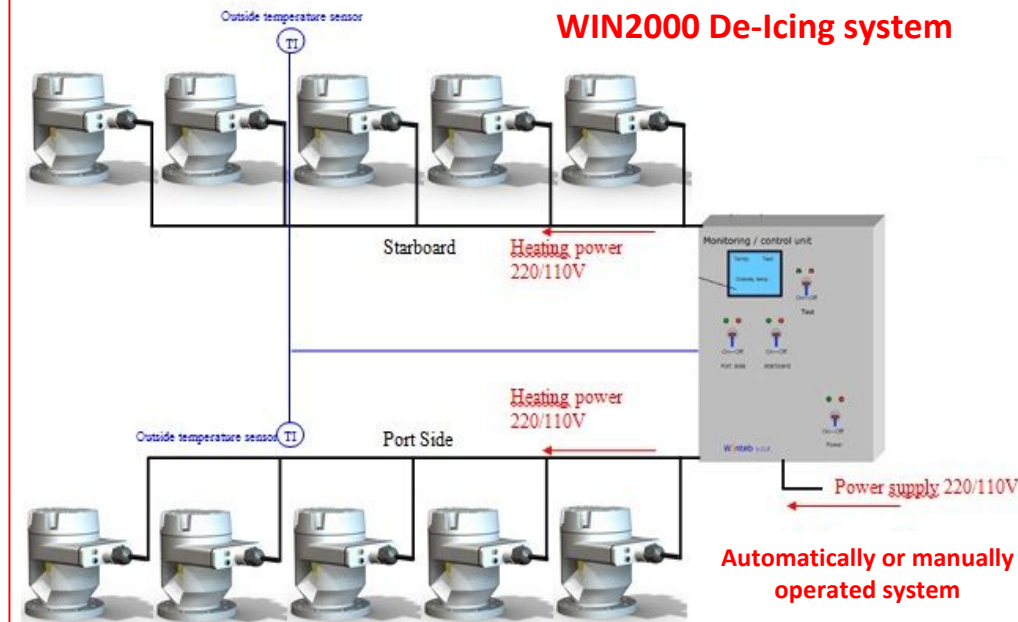
On < 5°C  
Off >45°C  
Switching tolerance °3°C

Options:  
1.Closing Device  
2.Screen  
3.Powder (epoxy) coating  
4.Sounding pipe

Available in 110V and 220V

Protection standard IP 67

## WIN2000 De-Icing system

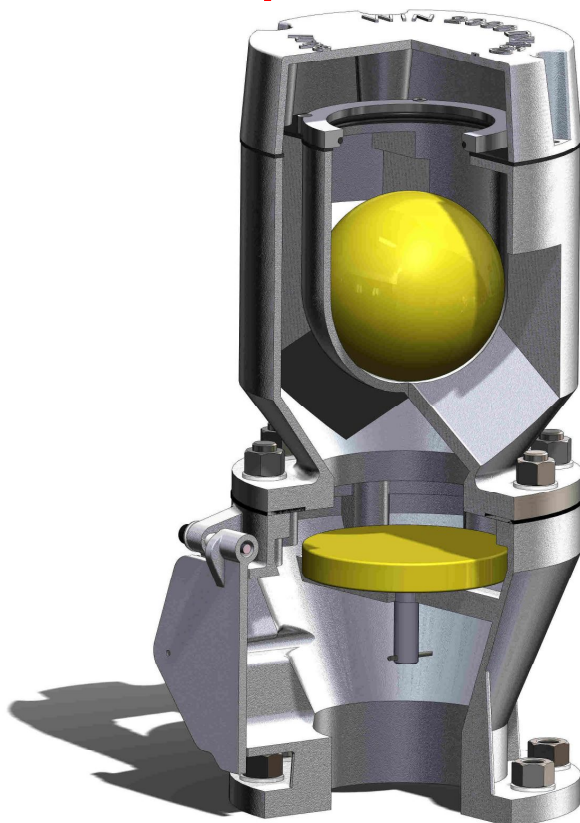


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## Liquid Mud Valve



## New: Liquid Mud Valve (LMV) with de-icing system

Face the cold with Winteb's heated Air Pipe Heads.  
From now on it is also possible to order our LMV with heating elements!

Photo 1: Heated LMV

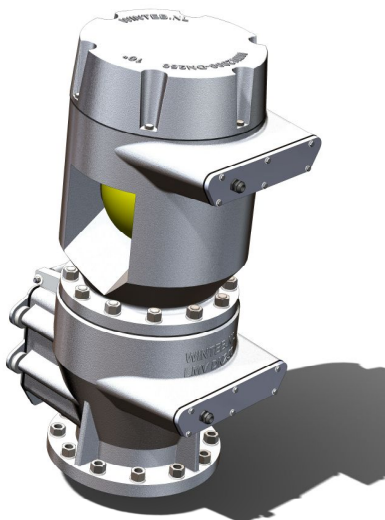


Photo 2: Heated LMV  
Valve in closed position

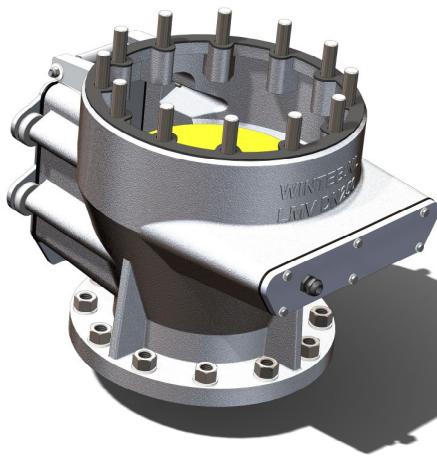
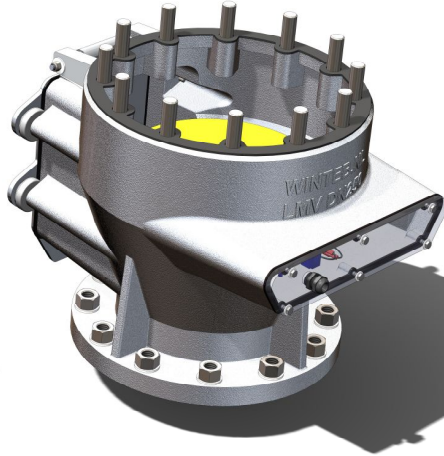


Photo 3: Heated LMV  
Valve in closed position, with  
exposed heating elements

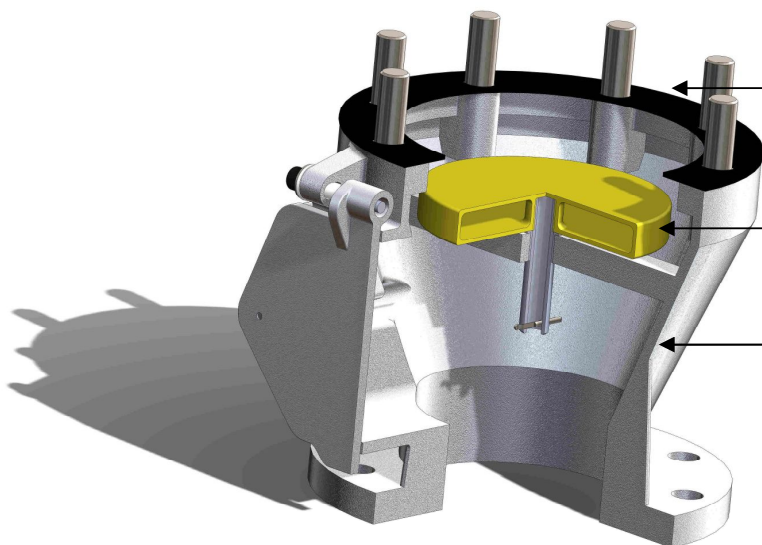


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## Liquid Mud Valve

### Valve in closed position



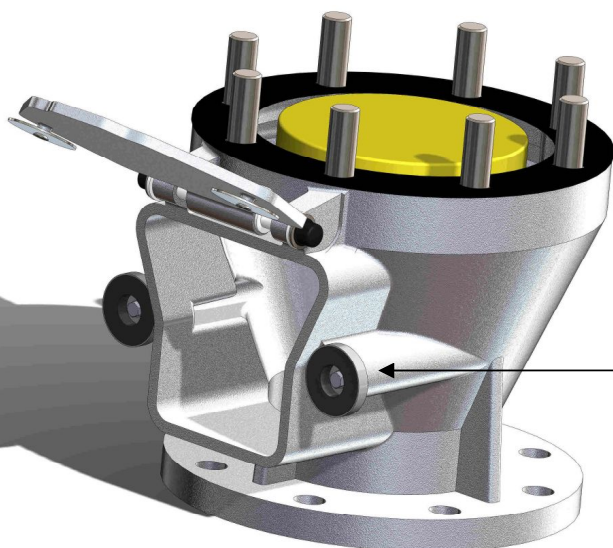
Flange connection ANSI150,  
DINPN10

Regular tank vent check valve  
to be fitted on top.

PE Float Disc

Seawater resistant  
aluminium casting

### Valve in open position

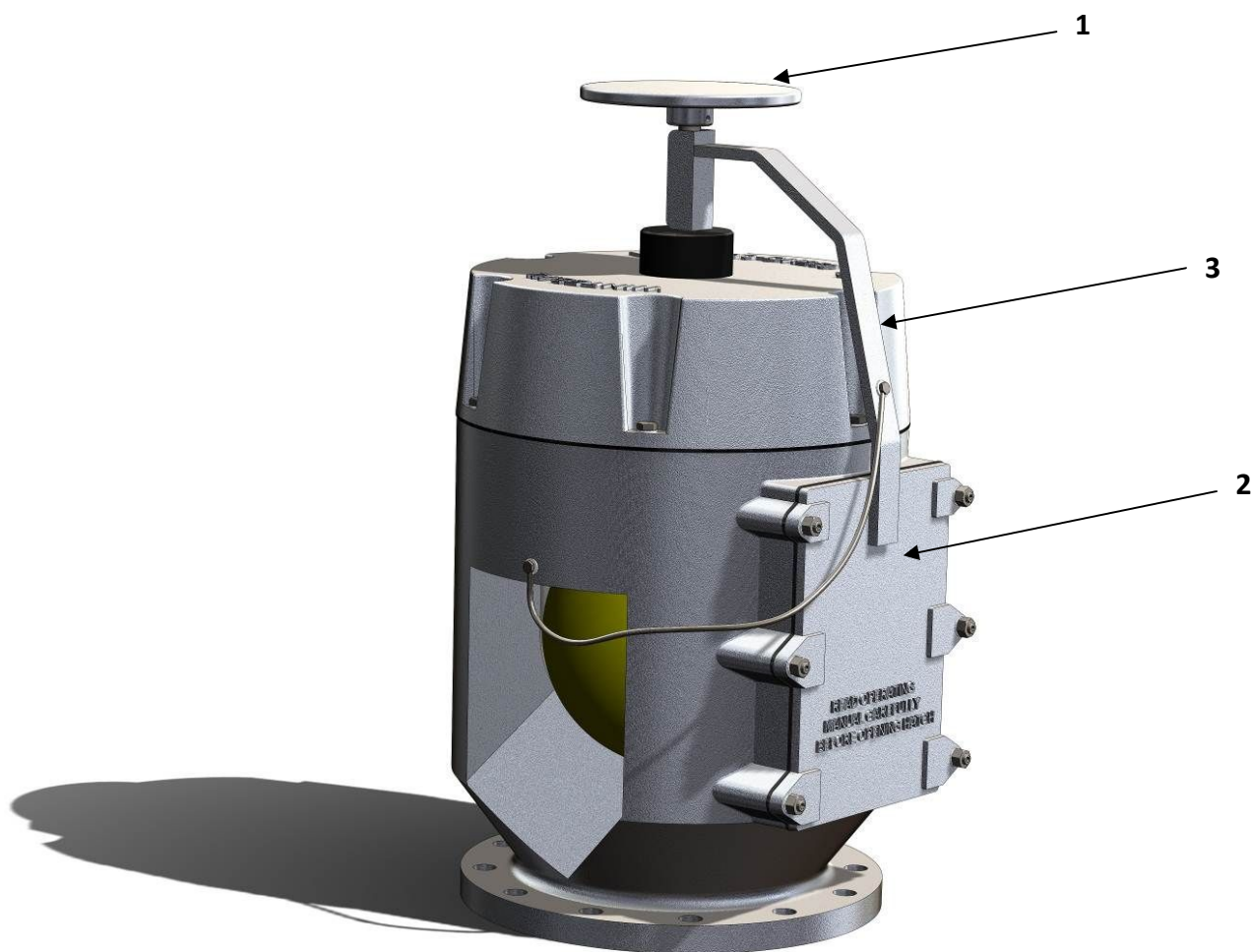


Opening pressure  
adjustable by magnets.

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**WIN2000 air pipe heads**  
**Ballast water management through continuously**  
**flushing ballast water.**



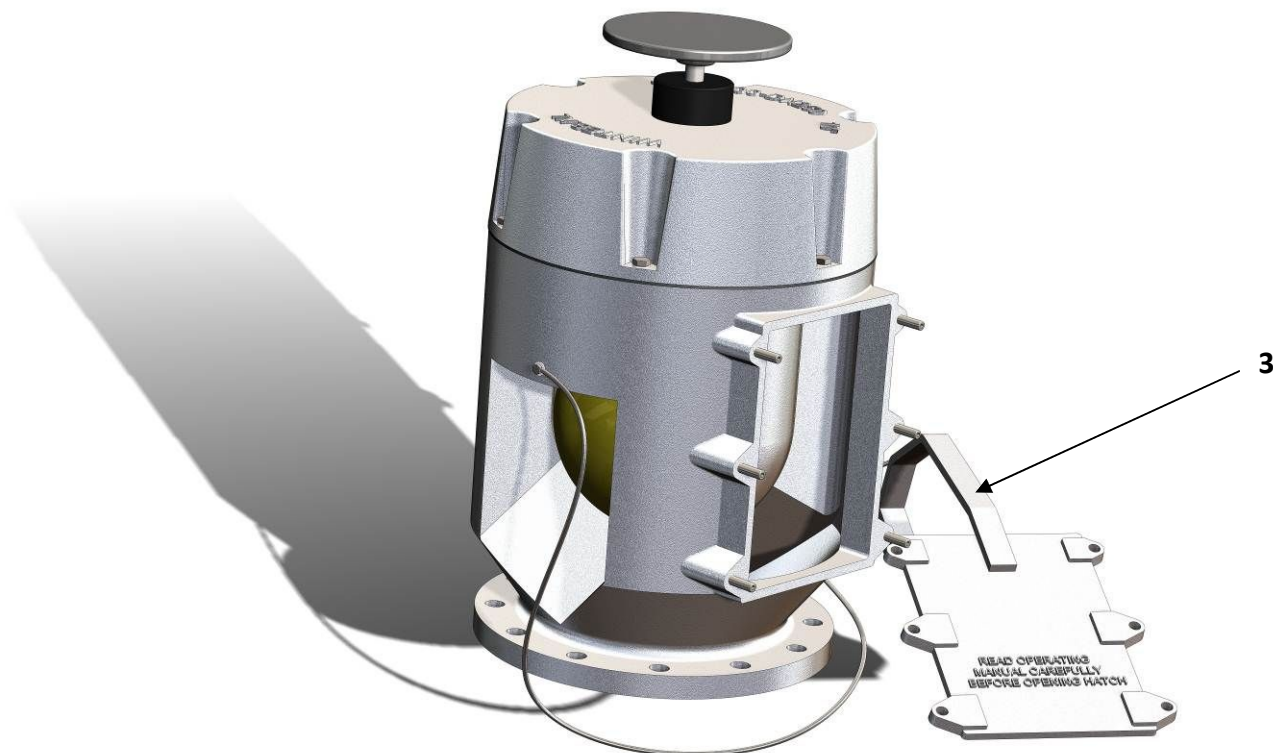
**Fitted with unique safety feature.**

1. Normal operations;  
A WIN2000 with an opened closing device (1) and a closed flushing exit (2). The unique safety feature prevents possible damage to the ballast tanks caused by human negligence. The system functions either as a normal air pipe head or as open pipe system.  
See reverse side

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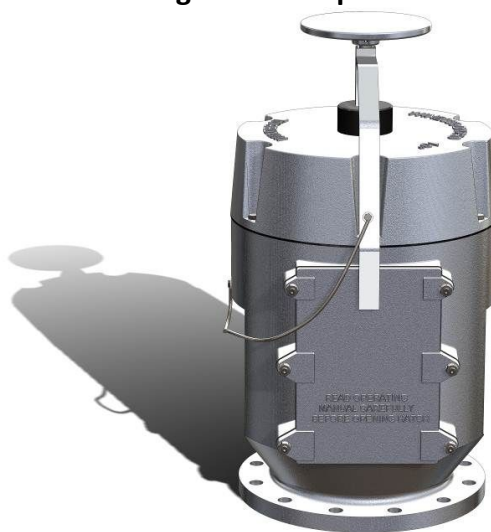
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2. Continuously flushing ballast water;  
A WIN2000 with closed closing device and an opened flushing exit.



The closing device prevents any possible damage to the float ball or O-ring seal that might compromise the water tightness of the air pipe head. The unique safety feature (3) prevents the air pipe system to be fully closed. The flushing cover is connected to the valve by a chain so it cannot be misplaced. No human mistakes possible.

3. After flushing ballast water the closing device is opened and the flushing cover is fitted back.

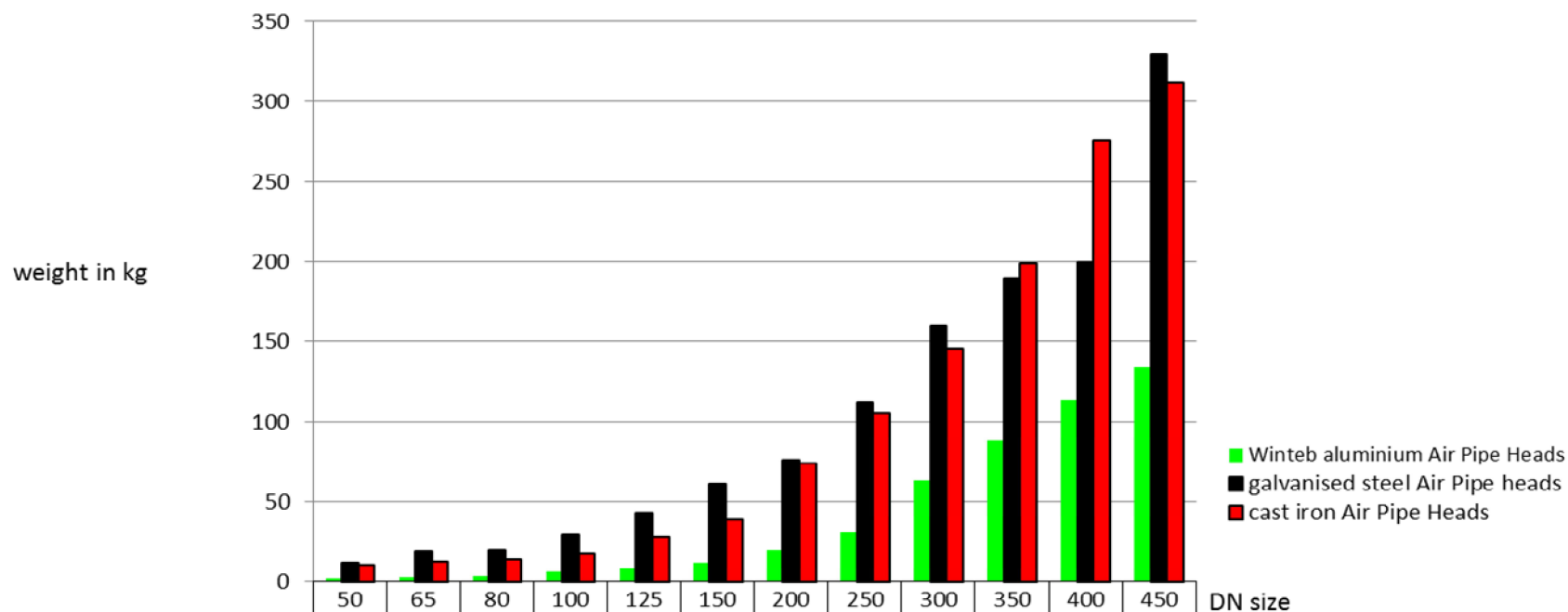


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**Less weight=less fuel**  
**Why carry more than necessary?**

Weight comparison Winteb **aluminium** vs. galvanised steel vs. **cast iron** Air Pipe Heads



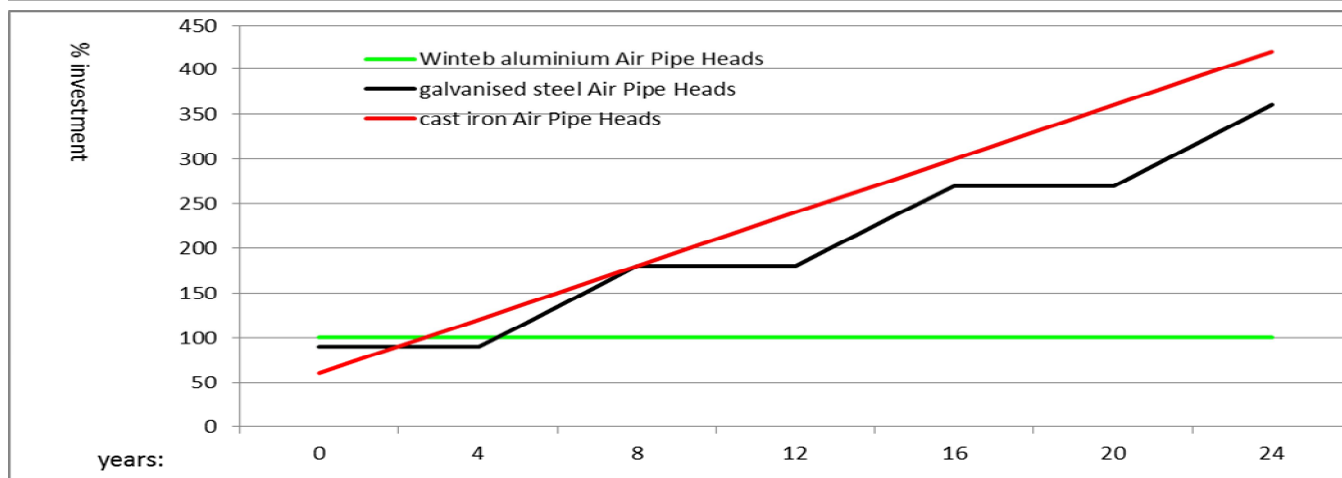
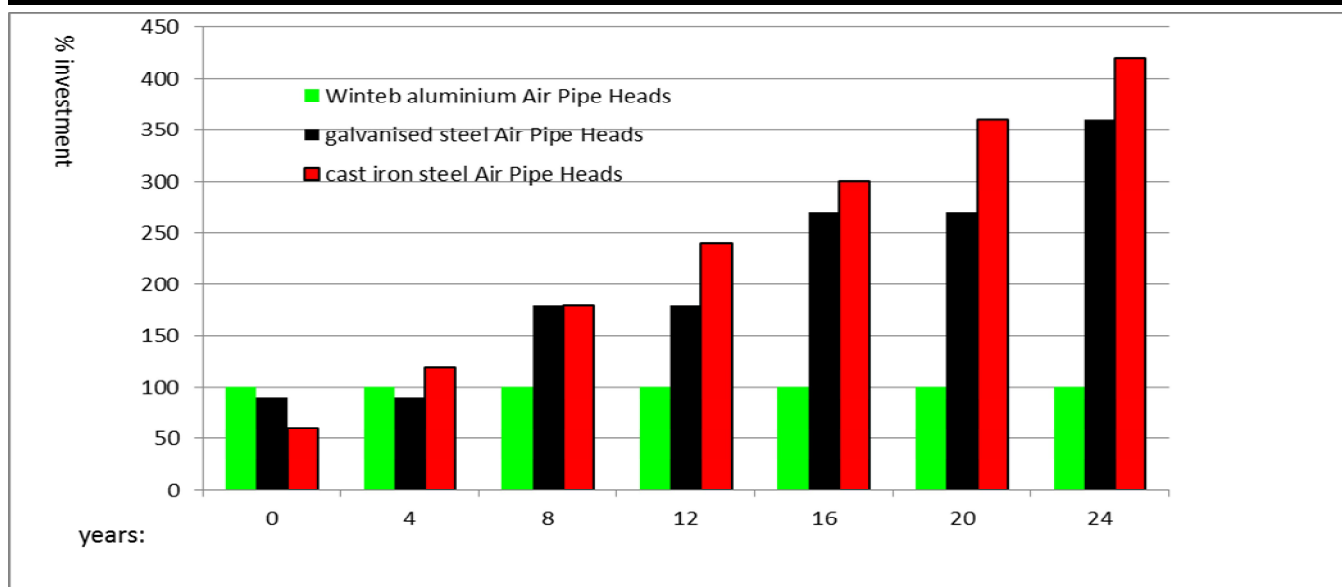
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### Winteb Seawater resistant Aluminium Air Pipe Heads: Cost Saving Long Term Investment

Comparison of investment over a period of 25 years  
Winteb non corroding aluminium Air Pipe Heads versus cast iron & galvanised steel Air Pipe Heads

Years	Replacement cast iron	Replacement Galvanised steel	Replacement Winteb	Total investment		
				cast iron	galvanised steel	Winteb
start				60%	90%	100%
4	YES	spare parts	NO	120%	90%	remains at 100%
8	YES	YES	NO	180%	180%	remains at 100%
12	YES	spare parts	NO	240%	180%	remains at 100%
16	YES	YES	NO	300%	270%	remains at 100%
20	YES	spare parts	NO	360%	270%	remains at 100%
24	YES	YES	NO	420%	360%	remains at 100%



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