

Controlling evaporation from water with Hexa-Cover[®] Floating Cover and water filled elements

Summer 2012

During summer 2012 the Hexa-Cover[®] Floating Cover was tested against water filled elements, as well as a reservoir with no cover, for the ability of controlling evaporation.

The test was carried out in a test facility in Denmark (not a warm and "evaporative" climate), and the results were pretty clear and conclusive - even in the Nordic conditions...

Hexa-Cover [®] Floating Cover	gained	40% (the increase of water is due to rain)
Water filled elements	lost	27% (even after the added rain, there is a lot lost water)
No cover	lost	35% (also after adding rain, there is a lot lost water)



The conclusion was;

The water filled elements – with its automatic intake of water into a heated up / boiling "chamber" – led to a significant increase of evaporation!

The more evaporation seen, the more intake of replacement water!



Winter 2012/2013

The above test was intended to continue throughout the winter 2012 / 2013.

However, the test stranded as the water filled elements – for the majority of them – was damaged / burst due to the expansion of the water as this turned into ice!

The included parts of the water filled elements simply became "separated" from each other, as to the expansion of the water!

The Hexa-Cover[®] Floating Cover naturally had no damage at all as it;

- has no weak spots
- has no hollow areas
- has no blow- / injection holes
- has no in- / outlet holes

Further, from the first launch of the Hexa-Cover[®] Floating Cover in 2004, no damage is reported due to frost!

Test conditions:

During the period of 1st December 2012 to 28th February 2013, Denmark (local conditions for the test facility) had the following weather conditions;

Air Temperature / C					Rain - N	fillimeter	Wind - MpSec		Degree days	Sun
Average	Average min	Average max	Absmin	Absmax	MM	Days with rain	Average	Maxgust	Numbers	Hours
-0,5	-2,7	1,4	-16,2	9,5	145,8	62,2	4,9	27,8	1571	167

Air Temperature / F					Rain - li	ı	Wind - MPH		Degree days	Sun	
1	Average	Average min	Average max	Absmin	Absmax	In	Days with rain	Average	Maxgust	Numbers	Hours
	31,1	27,1	34,5	2,8	49,1	5,74	62,2	11,0	62,2	1571	167



Summer 2013

As per May 1st 2013, a repeated test for controlling evaporation - similar to the above - was initiated. Also this time the Hexa-Cover[®] Floating Cover is tested up against water filled elements and still with a "No cover" reservoir as a reference.

The results so far, clearly indicate the same test outcome as for summer 2012 (please see above).

As per week 23 / 2013 the status is:

"No cover" reservoir (a <u>loss</u> of 31.4% of the water) "Water Filled Element" reservoir (a <u>loss</u> of 26.3% of the water)

As such it is more or less the same outcome if you cover with "Water Filled Elements", or you chose to have no cover!

where as the;

"Hexa-Cover® Floating Cover reservoir has an increase of the water of 7.5%

Change in amount of water (Index 100 as per the 1st May 2013):





Conditions:

During the weeks of testing DK has seen the following weather conditions (in C and F):

Week 17										Degree	
2013	Air Tem	perature /	С			Rain	- Millimeter	Wind - N	MpSec	days	Sun
		Average	Average	Abs	Abs		Days with		Max		
	Average	min	max	min	max	MM	rain	Average	gust	Numbers	Hours
	7	3,6	11,1	-1,3	14,1	11,1	4,9	5,9	22,9	69,9	48,8
Week 17										Degree	
2013	Air Temperature / F						Rain - In		Wind - MPH		Sun
		Average	Average	Abs	Abs		Days with		Max		
	Average	min	max	min	max	In	rain	Average	gust	Numbers	Hours
	44,6	38,5	52,0	29,7	57,4	0,44	4,9	13,2	51,2	69,9	48,8
Wook 19						<u> </u>				Dograa	
2012	Air Tom	noraturo /	C			Pain	- Millimotor	Wind - M	MnSoc	davs	Sun
2015	All Telli		C Average	Abc	Abc	Naill		vvinu - r	NIPSec	uays	Sull
	Average	Average	Average	ADS	ADS	N / N /	Days with	Average		Numbers	Hours
	Average	20	12.2	1 5				Average	an c		
Maal. 10	7,6	2,8	12,3	-1,5	17	1,5	5,9	6,4	20,6	05,8	62,4
Week 18	Air Tom	noratura /	-			Dain		Wind N		Degree	Cum.
2015	Air rem		F	A In a	A In a	Raill	- Davia vilitik	vvinu - r		uays	Sull
	Avorage	Average	Average	ADS	ADS	In	Days with	Avorago		Numbors	Hours
	Average	27.0		20.2	62.6	0.06	10	Average			62.4
	45,68	37,0	54,1	29,3	62,6	0,06	4,9	14,3	46,1	05,8	62,4
Week 19										Degree	
2013	Air Temperature / C					Rain	- Millimeter	Wind - N	ИрSec	days	Sun
		Average	Average	Abs	Abs		Days with		Max		
	Average	min	max	min	max	ΜМ	rain	Average	gust	Numbers	Hours
	13,4	9,7	17,8	2,6	26,7	22	5,8	5,1	20,4	27,6	40,4
Week 19										Degree	
2013	Air Temperature / F					Rain	- In	Wind - N	ИРН	days	Sun
		Average	Average	Abs	Abs		Days with		Max		
	Average	min	max	min	max	In	rain	Average	gust	Numbers	Hours
	56,12	49,5	64,0	36,7	80,1	0,87	4,9	11,4	45,6	27,6	40,4

When having collected more statistics, the results will be up-dated on a regularly basis during the coming period.

Please don't hesitate to contact me in relation to be above. Thanks.

Denmark 7th June 2013

5 Hexa-Cover ApS Søren Madsen