

**Design Solution:**

If the shelter is in risk of high pollution concentration or the pollution time around the shelter is long, chose the filter operating point in a way to have a high protection level. however if you consider economical issues or need more positive pressure in the shelter or there is lower pollution concentration, you can use the lower protection Class.

For example Class III filter can filtrate Hydrogen Cyanide with concentration 1000 mg/m3 (%80 humidity) more than 210 minutes but Class I filter can filtrate same concentration Hydrogen Cyanide (%80 humidity) for only 30 minutes or Class III filter can have acceptable performance in high concentration pollution but Class I can't or the Class III filter can operate more than 30 minutes at Chlorine pollution with 10000ppm concentration but the Class I filter can only filter 20 minutes Chlorine pollution(1000ppm) or the Class II filter can filtrate 20 minute Chlorine pollution(500ppm).

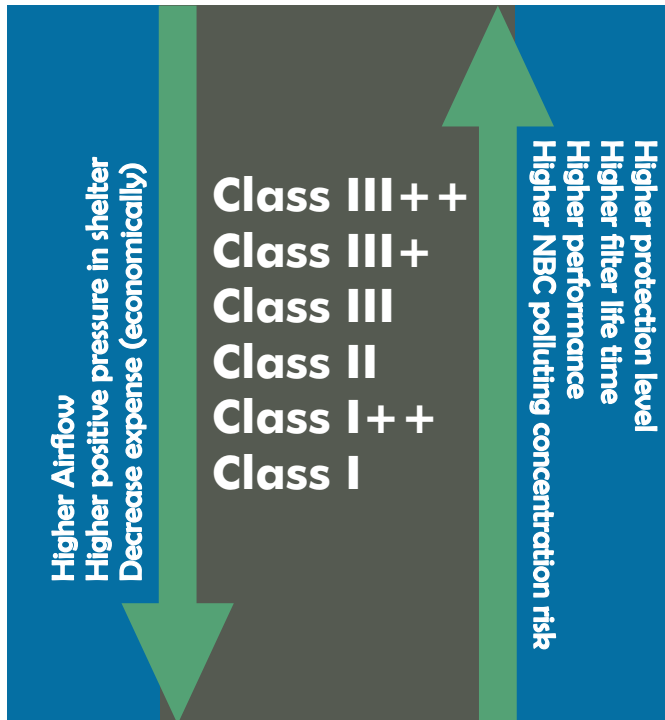
**Design criteria:**

The performance of the SHVF NBC 070 A NBC-filter has been tested and verified by the U.S. DEPARTMENT OF ENERGY.



**SAMHOON**

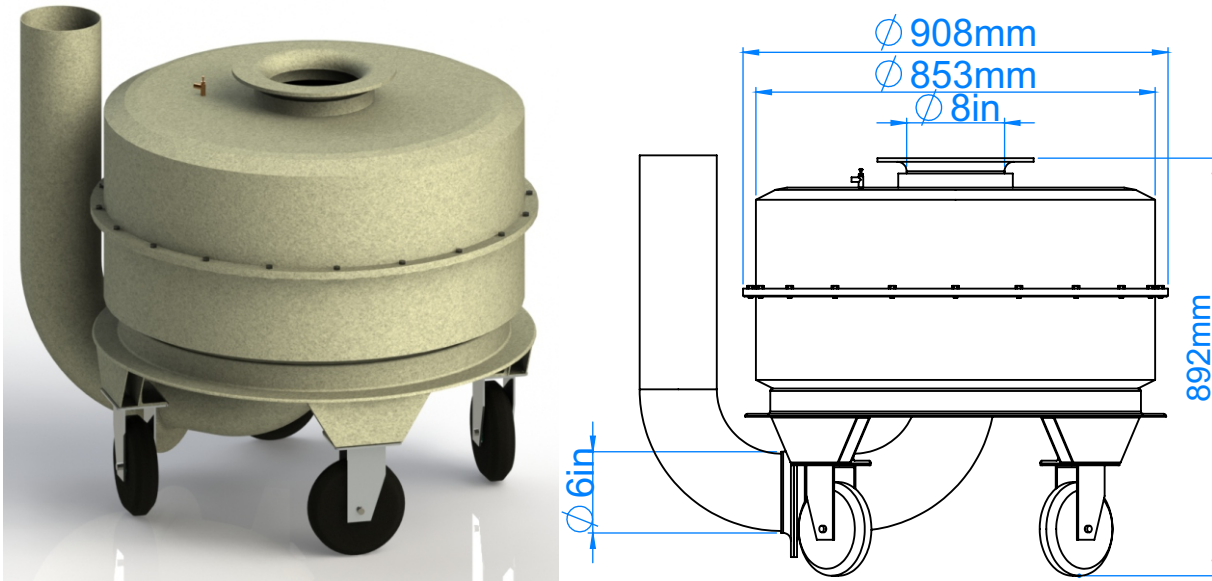
**Performance of filters is classified in follow protection level:**



NBC Filter Models	Air Capacity (m3/h)	Max. Pressure Drop (Pa)
SHVF NBC 188 A	762 ~ 1883	800 ~ 2450
SHVF NBC 098 A	381 ~ 979	700 ~ 2100
SHVF NBC 070 A	247 ~ 919	400 ~ 1850
SHVF NBC 030 A	116 ~ 418	450 ~ 1900
SHVF NBC 017 A	49 ~ 170	150 ~ 575



### Approximate Dimensions:



### Application:

CBRNe System  
NBC Shelter  
Underground bunkers  
Safe rooms  
Nuclear facilities  
Chemical plant

### Technical Specifications of the SHVF NBC 070 A

Hepa Filter Sizes (cm) : 50×50×7.5

Carbon type: ASZM-TEDA 6×16

#### CBRNe Solution

Item Number	NBC Filter Models	Protection Level	Air Capacity (m <sup>3</sup> /h)	NBC Bed Depth (cm)	Bed Contact Time (s)	Specific carbon volume(l/m <sup>3</sup> /h)	NBC Carbon Amount (L)	Max. pressure Drop (pa)	Suggested Fans Model
1	SHVF NBC 070 A	Class I+	919	10.9	0.24	0.08	69	1850	DF2 DDF 400 A
2		Class I++	636		0.35	0.11		1150	DF2 DDF 315 A
3		Class II	445		0.50	0.16		750	DF2 DDK 250 A
4		Class III	352		0.70	0.20		550	DF2 DDK 200 A
5		Class III+	278		0.80	0.25		450	DF2 DDK 200 A
6		Class III++	247		0.90	0.28		400	DF2 DDG 225 A
<b>Customized Filetr</b>									
7	SHVF NBC 070 B	Class III++	295	13.0	0.90	0.28	83	550	DF2 DDK 200 A

### Warnings:

- The Suggested electro fans have additional pressure to compensate filtration system's pressure drop(pipe ,valve and connections) so balance system airflow to operating point.
- If your system's pressure drop is high, big and suitable electro fan must be selected.
- If your system's pressure drop is low the amount of airflow through the filter must be limited by damper or valve ( or controlling fan speed) else our filter won't work in operating point and filter expected life time will decrease.
- If predict that the filters and fans exposure in a blast shockwave, using shockwave isolators recommended.

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