

**According to experience and current evaluation, there is no danger for policyholders from the Scand-Filter aerosol separator in normal operation.**

The danger evaluation took place in accordance with §3 of the Industrial Safety Regulation, §5 + §6 of the Working Conditions Act, §6 of the Ordinance on Hazardous Substances, and § 89 + §90 of the Works Constitution Act

### **Danger analysis / Risk evaluation**

The following danger analysis with risk evaluation is created by the supplier of the aerosol separator, MANN+HUMMEL Vokes Air, and is differentiated according to possible dangers (see danger classification) during transport (**T**), assembly (**M**), commissioning (**In**), in normal operation (**nB**), as well as dangers during maintenance (**W**).

It is a template and serves as a basis for handling.

In addition to the above-named laws and ordinances, a danger evaluation should likewise take place during operation, because employees in particular know the operation-specific framework and usage conditions and can better evaluate the respective risks.

Liability for damages due to a neglected danger evaluation or risk assessment by the end operator is excluded by MANN+HUMMEL Vokes Air.

The danger analysis and risk evaluation must be carried out by the operator himself, because only in this way can the operational circumstances be fully considered. For operation, the operator will make the decision of which measures must be undertaken for a respective risk.

For the risk evaluation, the worksheet "Risk evaluation according to Nohl" can be used. In the risk evaluation, the operation evaluates the risk using available and effective protective equipment. We have attached the classification of dangers created by us; the overall danger analysis and risk evaluation can be seen in our premises.

The handling need is determined by the risk accepted by the company. Independent of this, laws, regulations, and specifications must be upheld.

MANN+HUMMEL Vokes Air will point to possible dangers, create a danger analysis / risk evaluation, and will describe the measures to be taken. The operator must adjust or supplement these according to their operational conditions and personal responsibilities.

### **Possible dangers may arise for the operator primarily during maintenance work.**

Allow maintenance work to be carried out only by trained personnel who have read and understood the operating instructions and maintenance specifications. The operator should explain to maintenance personnel the expected dangers and accident risks and should establish necessary protective measures. The operating instructions and the appropriate industrial specifications must be observed. If necessary, after the training, a training evaluation must be carried out.

As desired, the training or maintenance work will be carried out by MANN+HUMMEL Vokes Air.

## Classification of dangers

No. (Classification)	Type of danger Assembly, commissioning, normal operation, maintenance	Present yes
<b>1</b>	<b>Mechanical dangers</b>	
1.1	Unprotected moving machine parts	<input type="checkbox"/>
1.2 M	Parts with dangerous surfaces	<input checked="" type="checkbox"/>
1.3 M,W	Moving transport materials, moving working materials	<input checked="" type="checkbox"/>
1.4 W	Uncontrolled moving parts	<input checked="" type="checkbox"/>
1.5 M,W	Falling, slipping, tripping, snapping	<input checked="" type="checkbox"/>
1.6 M,W	Falling	<input checked="" type="checkbox"/>
<b>2</b>	<b>Electrical dangers</b>	
2.1 In,W	Electric shock	<input checked="" type="checkbox"/>
2.2	Light arcs	<input type="checkbox"/>
2.3	Electrostatic charges	<input type="checkbox"/>
<b>3</b>	<b>Dangerous materials</b>	
3.1 W	Skin contact with dangerous materials (solids, liquids, wet work)	<input checked="" type="checkbox"/>
3.2 W	Breathing in of dangerous materials (gases, wet, mist, dust including smoke)	<input checked="" type="checkbox"/>
3.3	Swallowing of dangerous materials	<input type="checkbox"/>
3.4	Physical-chemical dangers (e.g. fire, explosion, etc.)	<input type="checkbox"/>
<b>4</b>	<b>Biological working materials</b>	
4.1	Danger of infection due to pathogenic microorganisms (e.g. bacteria, viruses)	<input type="checkbox"/>
4.2	Sensitising and toxic effects of microorganisms	<input type="checkbox"/>
<b>5</b>	<b>Danger of fire and explosion</b>	
5.1 W	combustible solids, liquids, gases	<input checked="" type="checkbox"/>
5.2	Explosive atmosphere	<input type="checkbox"/>
5.3	Explosive materials	<input type="checkbox"/>
<b>6</b>	<b>Thermal dangers</b>	
6.1	hot objects/surfaces	<input type="checkbox"/>
6.2	cold objects/surfaces	<input type="checkbox"/>
<b>7</b>	<b>Danger due to special physical influences</b>	
7.1 In,nB	Noise	<input checked="" type="checkbox"/>
7.2	Ultrasonic, infrasonic	<input type="checkbox"/>
7.3	Whole-body vibrations	<input type="checkbox"/>
7.4	Hand-arm vibrations	<input type="checkbox"/>
7.5	non-ionising radiation (e.g. infrared, UV, laser radiation)	<input type="checkbox"/>
7.6	Ionising radiation (e.g. X-ray radiation, radioactive radiation)	<input type="checkbox"/>
7.7	electromagnetic fields	<input type="checkbox"/>
7.8 IN,W	Negative or over-pressure	<input checked="" type="checkbox"/>
<b>8</b>	<b>Dangers due to working conditions</b>	
8.1	Climate (e.g. heat, cold, insufficient ventilation)	<input type="checkbox"/>
8.2	Illumination, light	<input type="checkbox"/>
8.3	Suffocation, drowning	<input type="checkbox"/>
8.4	insufficient flight and traffic paths, insufficient safety and health protection marking	<input type="checkbox"/>
8.5	insufficient movement areas in the workplace, unfavourable arrangement of the workplace, insufficient break, sanitary spaces	<input type="checkbox"/>

## Classification of dangers

No. (Classification)	Type of danger	Present yes
<b>9</b>	<b>Physical load/working conditions</b>	
9.1	heavily dynamic work (e.g. manual handling of loads)	<input type="checkbox"/>
9.2	one-sided dynamic work, body movement (e.g. frequently repeated movements)	<input type="checkbox"/>
<b>9.3 W</b>	Posture work (forced posture), strained work	<input checked="" type="checkbox"/>
9.4	Combination of static and dynamic work	<input type="checkbox"/>
<b>10</b>	<b>Psychological factors</b>	
<b>10.1 M,W</b>	insufficiently designed work task (e.g. overwhelming routine tasks, over- and under-qualification)	<input checked="" type="checkbox"/>
10.2	insufficiently designed work organisation (e.g. work under high time constraint, changing and/or long work hours, frequent night work)	<input type="checkbox"/>
10.3	insufficiently designed social conditions (e.g. missing social contacts, unfavourable management behaviour, conflicts)	<input type="checkbox"/>
10.4	insufficiently designed work and work environment conditions (e.g. noise, climate, spacial tightness, insufficient software design)	<input type="checkbox"/>
<b>11</b>	<b>Other dangers</b>	
11.1	from people (e.g. assault)	<input type="checkbox"/>
11.2	from animals (e.g. being bitten)	<input type="checkbox"/>
11.3	from plants and plant products (e.g. sensitising and toxic effects)	<input type="checkbox"/>

## Worksheet 5: Risk assessment

W Probability		S Extent of damage				
		without case of accident	with case of accident	light remaining damages to health	heavy remaining damages to health	death
		I	II	III	IV	V
frequent	A	1	2	3	3	3
occasional	B	1	2	3	3	3
seldom	C	1	2	2	3	3
improbable	D	1	2	2	2	3
practically impossible	E	1	1	1	2	2

R	Risk group	Risk	Measures
	Risk group 1	small	Measures organisationally and personally sufficient
	Risk group 2	average	Measures with normal protective effect necessary
	Risk group 3	large	Measures with increased protective effect absolutely necessary

With this scheme it is possible to evaluate the risk using the criteria “extent of damage” and “probability” and thus to illustrate the urgency of measures.