

Aanpak van Covid-19 in het Catharina Ziekenhuis

Anne Vrancken
2 april 2020

**Gedreven
door het
leven.**



catharina
ziekenhuis

Zelfontwikkeling spatscherm

Op te lossen problemen:

1. Tekort aan commercieel beschikbare beschermingsmiddelen
2. Beschermingsbrillen lastig voor brildraggers
3. Draagcomfort beschermingsbrillen



Inspiratie:



Zelfontwikkeling spatscherm

Ontwerp

1. Frame (lasercut) HDPE - reusable
2. Rubber rand - reusable
3. Screen (240 µm bindkaft) – disposable
4. Knoopsgatelastiek – disposable

Productie

- Lasersnijden van frame uitbesteed bij een fablab
- Schaar, perforator en vrijwilligers nodig voor deel 2 t/m 4 (1000 stuks in 4 uur met 4 man)

Implementatie

- Veiligheid beoordeeld door deskundige infectiepreventie
- Assemblage door zorgverlener zelf
- Nu test op verpleegafdeling en SEH



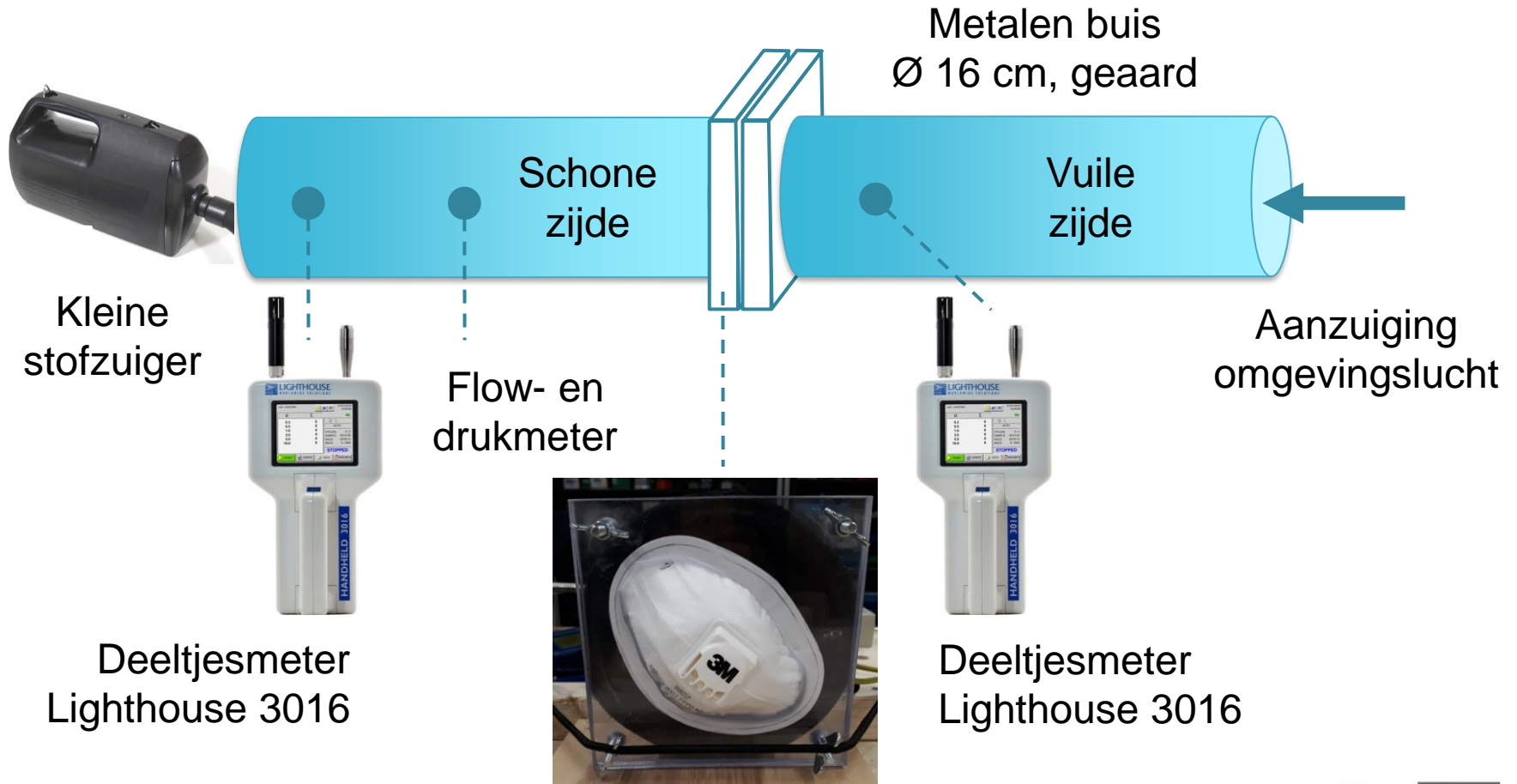
Kwaliteitscontrole mondmaskers

- Snelle fysieke check (pasvorm, sealnaden, elastiek)
- Deeltjesmeting
- Dossier check

Samenwerking tussen:

- Deskundige Steriele Medische Hulpmiddelen (DSMH)
- Deskundige infectiepreventie (DIP)
- Technische Dienst (expert luchtkwaliteit OK)
- Medische Techniek
- Klinische Fysica

Deeltjesmeting - opstelling



Deeltjesmeting - Resultaten

De resultaten zijn verwijderd uit deze publicatie. Voor meer informatie neem contact op met Anne Vrancken van het Catharina ziekenhuis (040-239 6479).

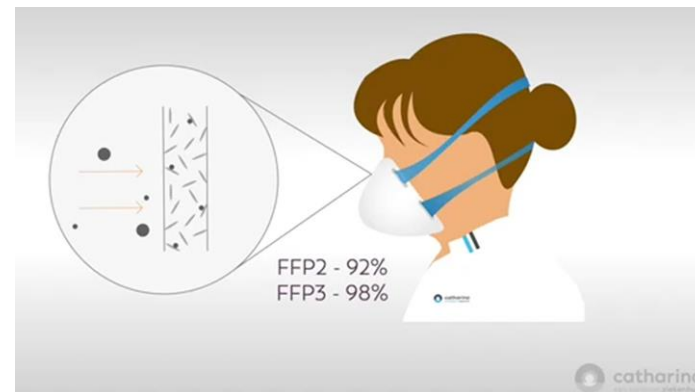
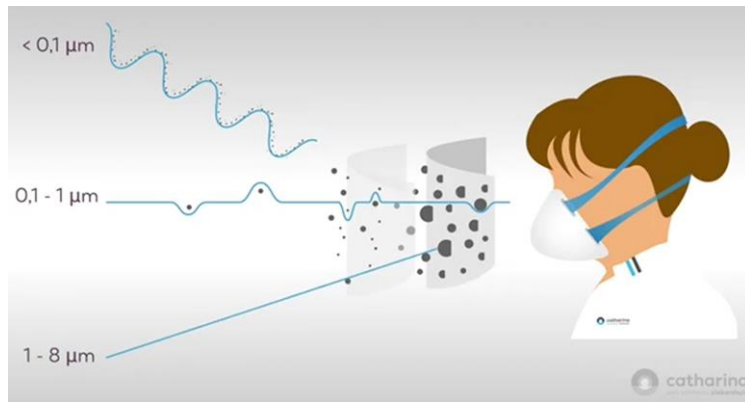
Deeltjesmeting - Aandachtspunten

1. Lekvrije afdichting tussen masker-PMMA en PMMA-buis
2. Ontwikkelde laminaire flow
 - Lengte vs. \emptyset buis
 - Deeltjesmeters op voldoende afstand van begin buis en masker
3. Vermijden statische elektriciteit
 - Geaarde metalen buis
4. Flow idealiter 0.25-0.5 m/s bij 16 cm \emptyset buis
5. Deeltjesaanbod
 - Boven drempelwaarde, omgevingslucht lijkt ok
 - Verzadiging deeltjesmeters bij artificiële deeltjes middels rookmachine

Dossier check

- 1^e keus: FFP2 (Europe, EN-149-2001)
- 2^e keus: N95 (United States, NIOSH-42CFR84)
- 3^e keus: KN95 (China, GB2626-2006)

In 4 stappen ..



Voorbeeld met stappenplan

1. Bepaal Notified Body(NB) op certificaat

2. Kijk in database of NB erkend is.

EU: Eurostat (ec) database

<https://ec.europa.eu/growth/tools-databases/nando/index.cfm?fuseaction=notifiedbody.main>

Amerika: Center for Disease Control (cdc) database

https://www.cdc.gov/niosh/npptl/topics/respirators/disp_part/N95list1sect2-r.htmlChina

China National Accreditation Service (cnas) database

https://las.cnas.org.cn/LAS_FQ/publish/externalQueryL1En.jsp

NB in Europese database:

▶ NB 1234	Efectis Nederland BV (/Centrum voor Brandveiligheid)	Netherlands
▶ NB 1240	ETEL SA	Greece
▶ NB 1242	ENERGIE CONSULT HOLLAND B.V.	Netherlands
▶ NB 1258	Eurofins Electric & Electronic Product Testing AG	Switzerland (MRA)
▶ NB 1259	Eidgenössisches Institut für Metrologie METAS - Zertifizierungsstelle METAS-Cert	Switzerland (MRA)
▶ NB 1282	ENTE CERTIFICAZIONE MACCHINE SRL	Italy
▶ NB 1293	EVPU a.s.	Slovakia
▶ NB 1418	EXVA ROBBANASBIZTOS BERENDEZESEK VIZSGALO ALLOMASA KFT.	Hungary
▶ NB 1465	ELTEST M. JEWTUCH SPOLKA JAWNA	Poland

Certificate – Сертификат – 證明書 – Certificat – 증명서 – شهادة

Form DAT_10-M04, version 00, effective since March 6th, 2020

Certificate of Compliance

No. 0B200319.ZLPUS81

Certificate's Holder: Jiangsu Caritol International Trading Co., Ltd.
No. 726-736, Building A, No. 6, Xinyuan Road, Jiangyin, Wuxi, Jiangsu, China

Certification ECM Mark: 

Product: Mask
Model(s): LK-C, LK-W, LK-L, LK-P, LK-M, KN95, KN90

Verification to Standard: EN 149:2001+A:2009
relate to CE Directive(s): R/2016/425 (Personal Protective Equipment)

Remark: This document has been issued on a voluntary basis and upon request of the manufacturer. It is our opinion that the technical documentation received from the manufacturer is satisfactory for the requirements of the ECM Certification Mark. The conformity mark above can be affixed on the products accordingly to the ECM regulation about its release and its use.

Additional information and clarification about the Marking:

CE The manufacturer is responsible for the CE Marking process. This document has been issued on the basis of the regulation on ECM Voluntary Mark for the certification of products. RGT/ECM rev 3.3 Available at: www.entecerma.it

Issuance date: 19 March 2020
Expiry date: 18 March 2025

Reviewer
Technical expert
Amanda Payne
Approver
ECM Service Director
Luca Badonni

Ente Certificazione Macchine Srl
Via Co' Bello, 243 - Loc. Castello di Serravalle - 40053 Valsamoggia (BO) - ITALY
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Certificaat ontvangen van aanbieder

شهادة - Certificate - 증명서

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related to CE Directive(s): R 2016/425 (Personal Protective Equipment)

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Issuance date: 19 March 2020
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Reviewer: Technical expert Amanda Payne
Approver: ECM Service Director Luca Badagni

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Certificaat gevonden op website NB

شهادة - Certificate - 증명서

Form QAT_10-M04, version 00, effective since March 6th, 2020

Certificate of Compliance

No. 0B200319.ZLPUS81

Certificate's Holder: Zhangjiagang Likang Protective Accessories Co., Ltd.
No. 1, Xinyuan Fumin Road, Miaobao, Tangqiao Town, Zhangjiagang City, Jiangsu Province, China

Certification ECM Mark: 

Product: Mask
Model(s): LK-C, LK-W, LK-L, LK-P, LK-M

Verification to: **Standard: EN 149:2001+A1:2009**
related to CE Directive(s): R 2016/425 (Personal Protective Equipment)

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Wat te verifiëren:

- 1 No. certificaat
- 2 Naam leverancier
- 3 Model maskers
- 4 Model vs. Normering
5. Datum
6. Adresgegevens

3. Traceer certificaat op website NB

4. Verifieer of leverancier betrouwbaar is (controleer website, contactgegevens, ISO-9001/ISO13485 certificering)

DANK U

Met dank aan iedereen die hier een bijdrage aan heeft geleverd



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ziekenhuis