# LYSARMATURER

# LINESPOT II LOWBAY NÖDLJUSARMATUR TWT1451WK

220-240 V 50/60 Hz AC, DC | LED | IP 20 | RAL 9003 | 650 °C | -O- | EN 60598-2-22

## Adresserbar 230 V centralmatade LED-nödljusarmatur

Den kompakta och eleganta Linespot II Lowbay är särskilt utformad för korridorbelysning. Armaturen monteras infälld; storleken på det infällda monteringshålet är Ø 75 mm. Linespot II Lowbays utformning är en diskret lösning för energieffektiv nödbelysning. Den ger en lång och smal ljusbild som lyser upp utrymningsvägen effektivt.

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# ENSKILD FÖRPACKADE ARMATURER

Produktkod som börjar med Y innehåller en enskild förpackade armatur. Produktkod som börjar med TW innehåller endast armaturen.

| Produktkod | E-nummer | IP-klass | Ljusflöde (lm) |
|---|---|---|---|
| Y1451WK | | IP20 | 250 |

| | |
|---|---|
| Produktkod | TWT1451WK |
| Funktion | Intelligent Controller, Tapsa Control |
| Montage (standard) | infälld |
| Tullkod | 94056080 |
| GTIN-kod | 6438045012254 |
| ETIM-produktklass | EC001957 |
| Längd | 100 mm |
| Bredd | 100 mm |
| Höjd | 50 mm |
| Vikt | 0,4 kg |
| Max inmatningseffekt VA | 10 VA |
| Max inmatningseffekt W | 5,5 W |
| Nominell anslutningsspänning | 220-240 V, 50/60 Hz AC, DC |
| Skyddsklass | I |
| IP-klass | IP20 |
| Drifttemperatur min-max | -30...+50 °C |
| Glödtrådstest för plastikkomponent | 650 °C |
| Ljuskälla | LED |
| Stommmaterial | plast |
| Håltagning för infälld montering | ø75 mm |

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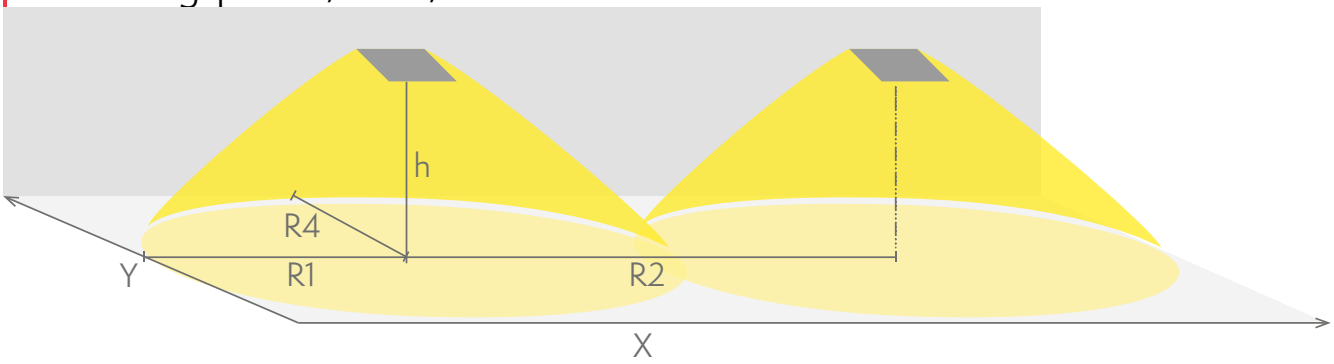
| | |
|---|---|
| Färg | RAL9003 |
| Elektrisk montage | 3 x 2,5 mm² |
| Ljusflöde | 250 lm |

# Nödbelysning för utrymningsväg (takmontage)

1 lux-tabell för utrymningsvägar i mittlinje, enlig normen EN 1838
Beräkningsplan 0,02 m, mätresultat i batteridrift.




R1 avstånd från vägg (X-axel)
R2 Avstånd mellan armaturerna (X-axel)
R4 Avstånd från vägg (Y-axel)

## TWT1451WK

| Montagehöjd (m) | Lux nivå under armaturen | R1 (m) | R2 (m) | R4 (m) |
|---|---|---|---|---|
| | | 1 lux | 1 lux | 1 lux |
| 2,5 | 7,5 | 9 | 21 | 1 |
| 4 | 3 | 10 | 28 | 1 |
| 6 | 1,5 | 9 | 22 | 1 |

# VALFRIA TILLBEHÖR:

## ANDRA TILLBEHÖR FÖR NÖDLJUSARMATURER

| Produktkod | E-nummer | Produktnamn | Kompatibla produktgrupper |
|---|---|---|---|
| TMT389 | | Tätningsring TMT389 | Linespot II: Lowbay, infällt montage nödljusarmatur, Zonespot II: Lowbay, infällt montage nödljusarmatur |

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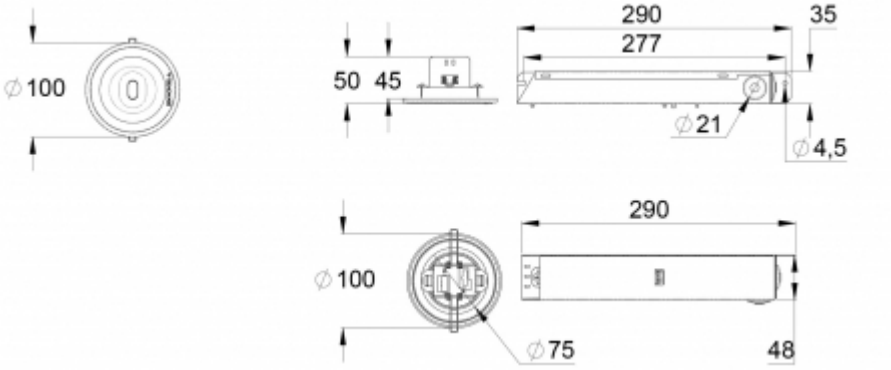


Telefon: 31 41 51 40, hjemmeside: www.nortek.st mail; post@nortek.st
org.nr: 995173743, Adresse: Strandveien 2F, 3050 Mjøndalen.
Utgave mars 2021, versjon 001, Forbehold om trykkfeil og endringer av data

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# Notat: NSA – PHA armaturer

| | | | |
|---|---|---|---|
| Prosjekt: | Nye Aker sykehus - PHA | Prosjektnr.: | 10235517-301 |
| Utarbeidet av: | Pål E. Thorstensen | Dato: | 09.01.2024 |

PHA – Belysningsløsninger - Armaturer

PHA skal være utstyrt med dynamisk belysning i sengerom, behandlingsrom, korridorer og oppholdsrom pasienter.

## KORRIDORER

Utklipp fra Belysningskonsept:



**6.1.2.2 Korridorer PHA**

*Hovedtrekk - Prinsipper*

- *Sirkulære armaturer plassert sentrisk i himling.*
- *Nisjer der det er vask/speil eller dører belyses særskilt med innfelte downlights*
- *Wallwashere i utvalgte områder for vertikal belysning av veggflater*
- *Wallwashere i utvalgte områder for vertikal belysning av veggflater*
- *Styres dag-natt samt med tilstedeværelsessensorer*

For PHA skal belysningen oppleves som rolig og lun. I korridorer skal det benyttes sirkulære armaturer med opal avskjerming slik at armaturene er synlige fra langt hold. Armaturene plasseres sentrisk i korridorbredden. Jevnheten brytes ved skifte i korridor-retning for å signalisere denne endringen. Mindre tverrforbindelser mellom korridorrekkene belyses særskilt med wallwashere og downlight for å bryte opp lysbildet.

I tillegg skal det også benyttes wallwashere for belysning av utvalgte vertikale flater og spesielle installasjoner på veggflate. Dette betyr også å framheve kontraster, vegger og motiver som er gjenkjennbare i den lange utsikten. Dette for å gi en variasjon i lysnivået og samtidig skape en gjenkjennelseseffekt. Imidlertid må det påses at det ikke rettes belysning mot glassvegger.

Alle nisjer i korridorer der det er vask/speil og dører, skal belyses med ekstra armaturer i form av en innfelt downlight.

Armatur korridorer:

*Sirkulær armatur*

*Tilleggsbelysning, downlight og Wallwasher*

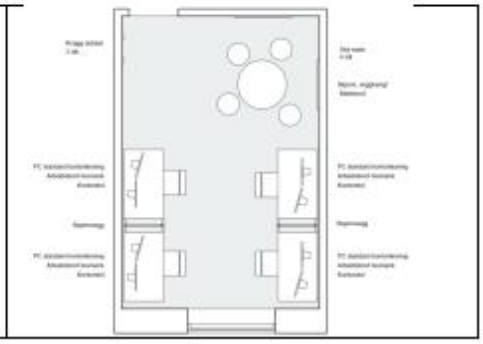
## ARBEIDSROM

Utklipp fra Belysningskonsept:

### 6.4 Arbeidsrom – tverrfaglig (SRF.006.02)

*Hovedtrekk - Prinsipper*

- *Hovedbelysning innfelt i himling*
- *Egen armatur over lite møtebord, nedhengt eller takmontert*
- *Styres med tilstedeværelsessensor og bryterpanel med scenarioløsninger*

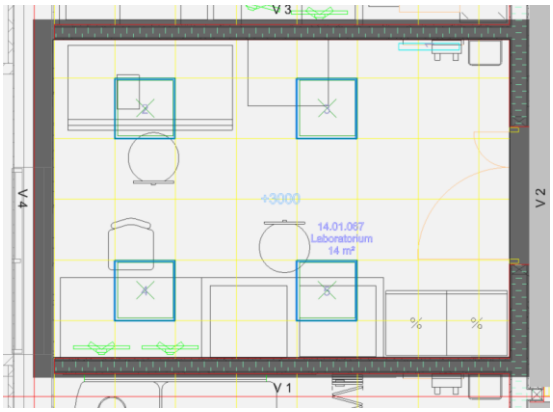


Belysningsstyrken på arbeidsplass skal være min. 500 lux. Belysningen løses med innfelte armaturer i himling. Der det er eget møtebord benyttes en separat innfelt eller utenpåliggende armatur.
Styres med tilstedeværelsesdetektor og DALI-bryterpanel med scenarioløsninger.

*Simulering arbeidsrom*

Armaturtyper arbeidsrom:

Klassisk armatur 600x600 med microprismatisk avskjerming



## SENGEROM

Det settes krav til at armaturer er godkjent iht robusthetsmatrisen.

*Robust innfelt armatur IK10*

*Robust sengelampe*

*Robust innfelt downlight*

Universal edge lights made of aluminium profile with frameless, free hanging acrylic legend panel.

## Technical data

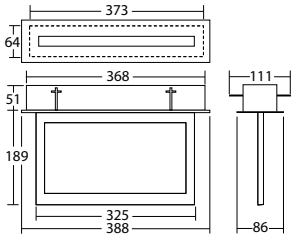
| | | | |
|---|---|---|---|
| **viewing distance:** | 30 m | **Nominal current AC:** | 30 mA |
| **Rated duration:** | 1h;1,5h;2h;3h;8h | **Apparent power:** | 6,8 VA |
| **Battery type:** | Ni-MH 4,8 V 1,1 Ah | **Inrush current:** | 11 A / 64 µs |
| **Material:** | aluminium | **Protection class:** | I |
| **Illuminant:** | 18 x 0,1W LED-module | **Input terminals:** | max. 2,5mm² single-core |
| **Nominal voltage AC:** | 230V AC ±10% 50/60 Hz | **Temperature ta:** | M: -5...+35 °C, NM: 0...+40 °C |

## Articles

### BNP 1013 E SV/B LED 1-8/D

| | | |
|---|---|---|
| Colors | RAL 9016 | RAL (special) |
| Art. no. | 101401372 | 101401473 |

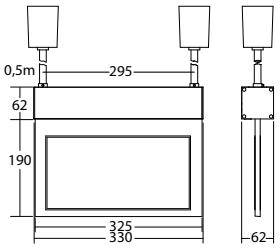
recessed ceiling mounting | Light colour: 6500 K | Protection category: IP40




### BNP 1013 P SV/B LED 1-8/D

| | |
|---|---|
| Colors | Aluminium |
| Art. no. | 101401170 |

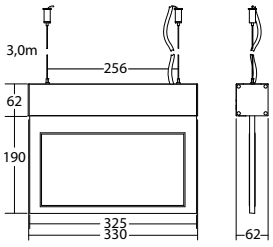
pendulum mounting | Light colour: 6500 K | Protection category: IP40




### BNP 1013 S SV/B LED 1-8/D

| | | |
|---|---|---|
| Colors | Aluminium | RAL (special) |
| Art. no. | 101401574 | 101401675 |

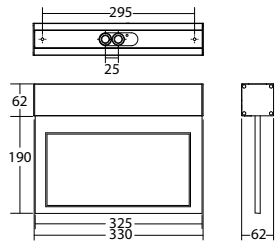
cable suspension mounting | Light colour: 6500 K | Protection category: IP40




### BNP 1013 SV/B LED 1-8/D

| | | |
|---|---|---|
| Colors | Aluminium | RAL (special) |
| Art. no. | 101400968 | 101401069 |

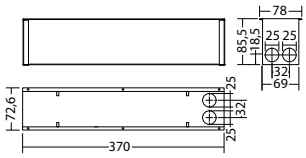
wall or ceiling mounting | Light colour: 6500 K | Protection category: IP40



INOTEC
Sicherheitstechnik GmbH

## recessed box for concrete ceiling inst.

Art. no. 100922537




| Name | Accessories | Art. no. |
|---|---|---|
| Legend panel 1013 PL/PR, 10mm | required | 101466343 |
| Legend panel 1013 PL/wht, 10mm | required | 101466040 |
| Legend panel 1013 PLO/PRO, 10mm | required | 101466949 |
| Legend panel 1013 PLO/wht, 10mm | required | 101466646 |
| Legend panel 1013 PLU/PRU, 10mm | required | 101467050 |
| Legend panel 1013 PLU/wht, 10mm | required | 101466848 |
| Legend panel 1013 PO/wht, 10mm | required | 101466444 |
| Legend panel 1013 PR/wht, 10mm | required | 101466141 |
| Legend panel 1013 PRO/wht, 10mm | required | 101466545 |
| Legend panel 1013 PRU/wht, 10mm | required | 101466747 |
| Legend panel 1013 PU upside-down, 10mm | required | 101467151 |
| Legend panel 1013 PU/PU, 10mm | required | 101466242 |
| Legend panel 1013 PU/wht, 10mm | required | 101465939 |
| Pendulum set BN-luminaire Bus0,5 m gr | required | 101447448 |
| Pendulum set BN-luminaire Bus0,5 m wh | required | 101447145 |
| Pendulum set BN-luminaire Bus1,0 m gr | required | 101447549 |
| Pendulum set BN-luminaire Bus1,0 m wh | required | 101447246 |
| Pendulum set BN-luminaire Bus2,0 m gr | required | 101447650 |
| Pendulum set BN-luminaire Bus2,0 m wh | required | 101447347 |
| conversion kit pendulum BNP/SNP 1013 | optional | 101443913 |
| conversion kit wire mounting BNP/SNP 1012 | optional | 101443610 |
| conversion kit wire mounting BNP/SNP 1013 | optional | 101443711 |
| recessed box for concrete ceiling inst. | optional | 100922537 |

**Info:** When ordering an exit luminaire, the required pictogram with the corresponding arrow direction must be indicated.

PO: PR: PU: PL: PRO: PRU: PLU: PLO:

**Info:** For luminaires with pendulum mounting, select the desired pendulum (length and colour of baldachin).

# RØYKDETEKTOR

# Optisk røykdetektor - BH-200

**Interaktive brannedteksjonssystem**
**Produktdatablad**

### Egenskaper

- Interaktiv
- Forskjellige følsomhetsinnstillinger er mulig
- Med *DYFI+* adaptive og selvlærende funksjoner
- Overvåking av optisk bane og strømkrets
- Innebygd termistor for avlesing av temperaturen i målepunktet.
- Kortslutnings-skillebryter i hver detektor.
- Innebygget alarmindikator (LED)
- Tilfredsstiller EMC-direktivet
- Automatisk adressering
- Utprøvd teknologi
- Immun overfor elektromagnetisk støy
- EN 54-7/EN 54-17
- Tilfredsstiller kravene til maritime klassifiseringsorganisasjoner.

### Beskrivelse

BH-200 er en optisk punktrøykdetektor for deteksjon av forbrenningsgasser som i hovedsak består av synlige partikler. Detektoren har en innebygget termistor og er laget for bruk sammen med Autronicas interaktive branndeteksjonssystem.

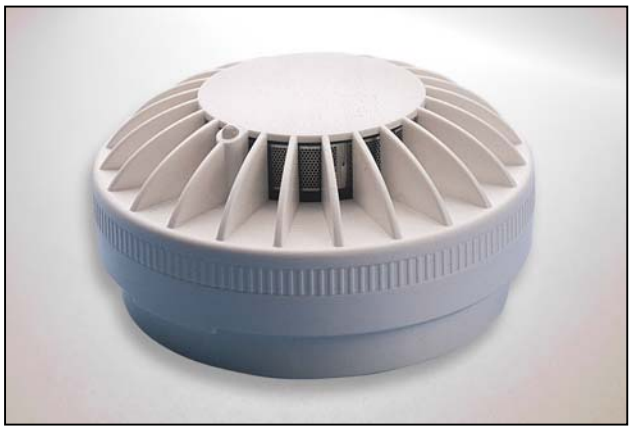
### Applikasjoner

BH-200 er egnet i de fleste anvendelser hvor man forventer synlig røk under en brann, som f.eks.:

- Soverom
- Restauranter
- Kontorer
- Korridorer
- Elektriske rom
- Produksjonsområder osv.

### Prinsipp

Fotoelektrisk, drives etter lyssprednings-prinsippet.



### Versjoner

- BH-200 Røykdetektor, standard
- BH-300* Røykdetektor med SelfVerify
- BH-500* Røykdetektor med SelfVerify, miljøbeskyttet.
- BH-500/S* Røykdetektor med SelfVerify, miljøbeskyttet, høysensitiv
- BH-500/Ex* Røykdetektor med SelfVerify, EExia-versjon for bruk i alle soner.
- BH-500/Ex/S* Røykdetektor med SelfVerify, EExia-versjon for bruk i alle soner, høysensitiv
- BH-500/N* Røykdetektor med SelfVerify, EExn-versjon for bruk i zone 2
- BH-500/S/N* Røykdetektor med SelfVerify, EExn-versjon for bruk i sone 2, høysensitiv

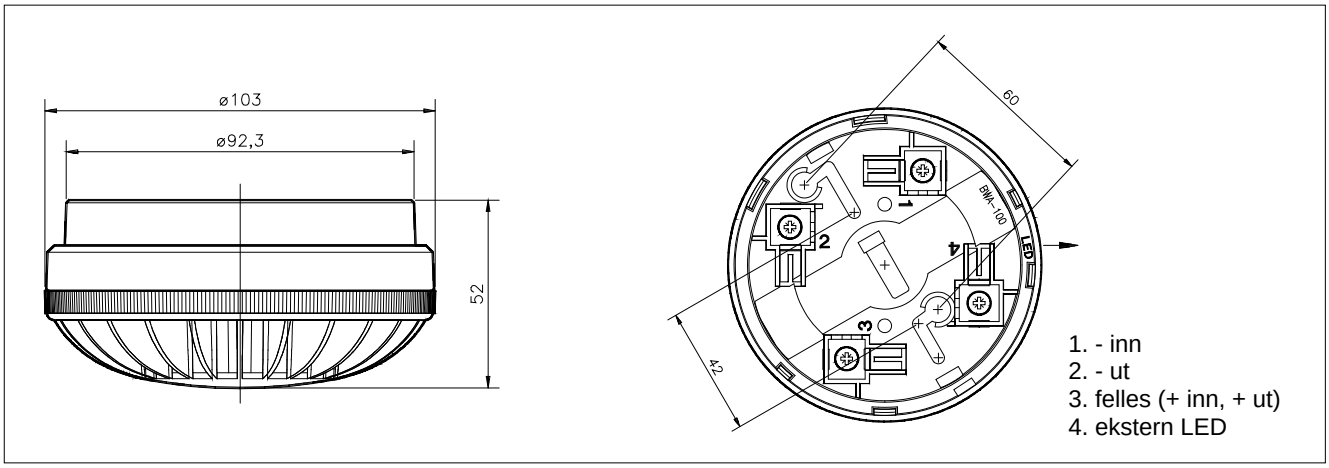
* Se separat datablad.

### Tabell 1 – Responsklasser

| Responsklasse | Typisk applikasjon |
|---|---|
| Ren | Datarom |
| Normal 1 | Kontor |
| Normal 2 | Restaurant |
| Industri | Verksted |

| Tekniske spesifikasjoner | |
|---|---|
| Vekt | 150 g |
| Materialer | PC/ABS |
| Farge | Hvit |
| Følsomhet | Se tabell 1 |
| Spenning | 16 – 26 VDC |
| Strømforbruk:<br>Hvile<br>Ekstern alarmindikator | <br>< 0,3mA<br>6mA |
| CPD-serifikat | 1134-CPD-016 |
| Beskyttelsesgrad | IP44D |
| Arbeidstemperatur | - 20 - + 70°C |
| Fuktighet (ikke-kondenserende) | Maks. 95% RH |
| Vedlikehold | Krever ikke vedlikehold |
| Service | Bytt hvis defekt |
| Godkjenninger | Se Autronicas hjemmeside |

## Dimensjoner/tilkoblinger




1. - inn
2. - ut
3. felles (+ inn, + ut)
4. ekstern LED

## Bruk av LED-utgang

Når ekstern lysdiode eller evt. optokobler er koblet til LED-utgangen, må man koble en varistor - Siemens SIOVS07K25 (39V) - Autronica art. nr. 116-8464-003.5039, mellom klemme 1 og 4 i sokkelen. Vær oppmerksom på at utgangen vil variere i takt med sløyfekommunikasjonen (lysdioden blinker).

Lysdioden kobles mellom klemme 3 og 4, hvor klemme 3 er den positive klemmen.

| Artikkelnummer | Beskrivelse |
|---|---|
| 116-BWA-100 | Sokkel |
| 116-BHH-200 | Detektorhode |
| 116-BWP-100/20 | Ekstra koblingsboks for M20 nipler |
| 116-BWP-100/25 | Ekstra koblingsboks for M25 nipler |
| 116-BBR-52 | Ekstra lydgiver – SmartBuzzer |

**AUTRONICA FIRE AND SECURITY AS**
**Hovedkontor: NO-7483 Trondheim** Tlf: 73 58 25 00, faks: 73 58 25 01, e-post: info@autronicafire.no
**Regionskontor: Oslo** 23 28 70 00**, Moelv** 62 34 10 00**, Tønsberg** 33 33 19 30**, Notodden** 35 01 18 18,
**Bergen** 55 17 61 80**, Harstad** 77 00 25 50**, Stavanger** 51 84 09 00**, Haugesund** 52 83 88 50**, Kristiansand** 38 06 61 00

**Besøk Autronica Fire and Security AS sine nettsider: www.autronicafire.no**

# ID300

# Konvensjonell Multikriteriedetektor

# Iris serie

**Generelt**

ID300 er en konvensjonell multikriteriedetektor. Hver enhet fra Iris serien identifiseres av et unikt fabrikktildelt serienummer. Dette muliggjør at parameter som sensitivitet og driftsmodus kan endres på hver enkelt detektor via ToolKit EDRV200.

Versa++ teknologien muliggjør disse detektorene til å bli konfigurert i samsvar med de påkrevde deteksjonsmetodene. Dette muliggjør at detektorene kan tilpasse seg perfekt til ytre forhold og indikere effektiv deteksjon ved hendelser.
Følgende parameter er tilgjengelig:

- Driftsmodus (Blinkende LED, blinkende parallell-lampe)
- Justering av optisk sensitivitet
- Manuell aktivering av LED
- Forespørsel om rapportering av feil
- Komplett diagnose

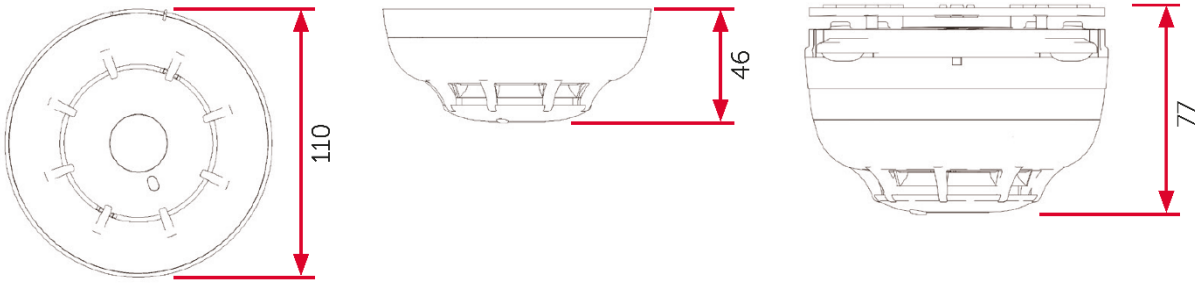
**Hovedfunksjoner**

- Innsektskjerm på 500µm hulldiasmeter
- To farger LED: Rød for alarm; grønn blinking for polling og grønt fast for manuelt aktivering av LED via ToolKit
- Versa++ teknologi
- 4 ulike røyksensitiviteter (0.08 – 0.10 – 0.12 – 0.15 dB/m)
- 4 ulike varmesensitiviteter (A2S, A1R, B, BR)
- 5 ulike driftsmoduser:
    - PLUS modus: hvor detektoren vil trigge en alarm om de målte verdiene overstiger terskelen for røyk eller terskelen for målt temperatur. Dessuten vil det ved en stigende temperaturhendelse, sette terskelen for røyk til laveste verdi. Denne driftsmodusen karakteriserer en høy sensitivitet som muliggjør rask deteksjon av flammebranner (f.eks. branner som involverer brennbare væsker som alkohol).
    - OR modus: hvor detektoren vil trigge en alarm om de målte verdiene overstiger terskelen for røyk eller terskelen for målt temperatur. Denne driftsmodusen karakteriserer en diskre sensitivitetsanalyse, hvor detektoren vil trigge på branner med høy røykutvikling og lav varme (f.eks. ulmebranner) og også branner med lite røykutvikling, men høy varme (f.eks. brennende kjemikaler)
    - AND modus: hvor detektoren kun vil trigge en alarm om de målte verdiene overstiger terskelen for røyk og terskelen for målt temperatur. Denne driftsmodusen forhindrer falske alarmer, men hver oppmerksom på at det må utføres en risikoanalyse for driftsmodusen.
    - SMOKE modus: hvor detektoren kun vil trigge en alarm om de målte verdiene overstiger terskelen for røyk (0.08 – 0.10 – 0.12 – 0.15 dB/m).
    - HEAT modus: hvor detektoren kun vil trigge en alarm om de målte verdiene overstiger terskelen for målt temperatur.
- Komplett diagnose, lesing av nedsmussing og verdier i sanntid
- Husker siste 5 minutter av røykverdier fra siste alarm.

**Tekniske spesifikasjoner**

- Sertifisering: CPR EN54/Pt7-pt17
- Deteksjonsprinsipp: lysdiffusjon (Tyndall effekten)
- Alarmoverføringsmetode: uavhengig polling
- Identifikasjon for nedsmussing eller feil på detektor
- Prøvetaking: hvert 4 sekund
- Spenningsområdet: 19-30VDC
- Strømtrekk i normaldrift: 200µA
- Strømtrekk i alarm: max. 20mA
- Sensitivitet røyk: 0.08 – 0.10 – 0.12 – 0.15 dB/m
- Sensitivitet varme:
    - A2S aktiveres ved 58°C
    - A1R aktiveres ved 58°C eller rask temperaturstigning
    - B aktiveres ved 72°C
    - BR aktiveres ved 72°C eller rask temperaturstigning
- Omgivelsestemperatur: fra -5°C til +40°C
- Kapslingsgrad: IP40
- Sokkeltilkobling: Bajonettkobling
- Høyde med EB0010 sokkel: 54mm
- Høyde med summer/flash: 85mm
- Diameter: 110mm
- Art.nr. ID300 hvit: 100041
- Art.nr. ID300 svart: 101353

**Mål:**



# Multisensor - BH-220

**Interaktive branndeteksjonssystem**
**Produktdatablad**

## Egenskaper

- Interaktiv
- Sikrer hurtig respons på forskjellig brannforløp
- Røykdetektor for deteksjon av forbrennings-gasser som i hovedsak består av synlige (store) partikler. Varmeføler-assistert deteksjon for tidlig deteksjon av flammebrann.
- Med *DYFI*+ adaptive og selvlærende funksjoner
- Kortslutnings-skillebryter i hver detektor
- Innebygget alarmindikator (LED)
- Automatisk adressering
- Utprøvd teknologi
- EN 54-5/EN 54-7/EN 54-17
- Tilfredsstiller kravene til maritime klassifiseringsorganisasjoner

## Beskrivelse

BH-220 er en multisensor-detektor basert på en optisk punktrøykdetektor kombinert med en temperaturføler. En temperaturstigning vil endre deteksjonsplattformen ved å øke røkfølsomheten for å forbedre deteksjonen av forbrenningsgasser fra flammebranner som produserer minimalt med synlige røykpartikler.

Multisensorens prinsipp kombinert med avansert signalhåndtering i detektoren sikrer tidlig respons på alle typer brannutvikling.

Detektoren er laget for bruk sammen med Autronicas interaktive branndeteksjonssystem.

BH-220 har DYFI+ intelligens som gjør detektoren selektiv overfor villedende miljøfenomener som i et tradisjonelt system ville ha ført til uønsket brannalarm. Kombinert med den generelle røykfølsomheten til BH-220 gjør dette detektoren velegnet for alle krevende bruksområder hvor det er potensiell fare for flamme og/eller ulmebrann.

## Prinsipp

Dobbel - 2 - følerdetektor. Fotoelektrisk, fungerer etter lysspredningsprinsippet og temperaturen måles ved hjelp av en termistor.

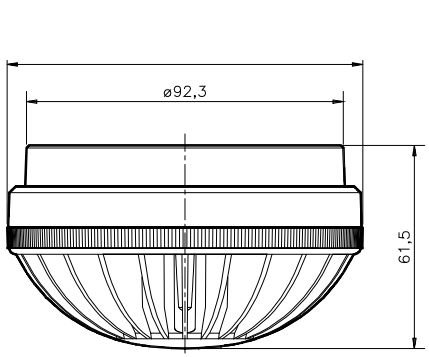
## Versjoner

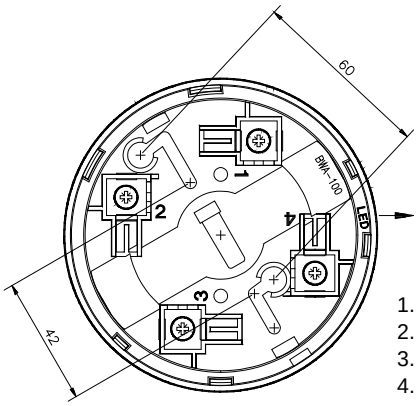
- BH-220 MultiSensor, standard
- BH-320* MultiSensor med SelfVerify.
- BH-520* MultiSensor med SelfVerify, miljøbeskyttet.
- BH-520/Ex* MultiSensor med SelfVerify, EExia-versjon for bruk i alle soner.
- BH-220/N* MultiSensor med SelfVerify, EExn-versjon for bruk sone 2.

* Se separat datablad.

| Tekniske spesifikasjoner | |
|---|---|
| Vekt | 165 g |
| Materiale | PC/ABS |
| Farge | Hvit |
| Følsomhet | Se tabell 1 og 2 |
| Spenning | 16 - 26 VDC |
| Strømforbruk<br>Hvile:<br>Ekstern alarmindikator: | <br>< 0,3mA<br>6mA |
| CPD-sertifikat | 1134-CPD-017 |
| Beskyttelsesgrad | IP44D |
| Arbeidstemperatur | - 20 - + 70°C |
| Fuktighet (ikke-kondenserende) | Maks. 95% RH |
| Vedlikehold | Krever ikke vedlikehold |
| Service | Bytt hvis defekt |
| Godkjenninger | Se Autronicas hjemmesider |

### Dimensjoner/tilkoblinger




1. - inn
2. - ut
3. felles (+ inn, + ut)
4. ekstern LED

### Bruk av LED-utgang

Når ekstern lysdiode eller evt. optokobler er koblet til LED-utgangen, må man koble en varistor - Siemens SIOVS07K25 (39V) - Autronica art. nr. 116-8464-003.5039, mellom klemme 1 og 4 i sokkelen. Vær oppmerksom på at utgangen vil variere i takt med sløyfekommunikasjonen (lysdioden blinker).

Lysdioden kobles mellom klemme 3 og 4, hvor klemme 3 er den positive klemmen.

### Tabell 1 – Responsklasser

| Reaponsklasse | Typisk applikasjon |
|---|---|
| Ren | Datarom |
| Normal 1 | Kontor |
| Normal 2 | Restaurant |
| Industri | Verksted |

### Tabell 2 – Operasjonsklasser

| Operasjonsklasser | Alarmkriterie |
|---|---|
| Multisensor m/varme | Røyk eller varme |
| Multisensor | Røyk (varmeassistert) |
| Kun varme | Varme (klasse A1) |

| Artikkelnummer | Beskrivelse |
|---|---|
| 116-BWA-100 | Sokkel |
| 116-BHH-220 | Detektorhode |
| 116-BWP-100/20 | Ekstra koblingsboks for M20 nipler |
| 116-BWP-100/25 | Ekstra koblingsboks for M25 nipler |
| 116-BBR-52 | Ekstra lydgiver – SmartBuzzer |

**AUTRONICA FIRE AND SECURITY AS**
**Hovedkontor: NO-7483 Trondheim** Tlf: 73 58 25 00, faks: 73 58 25 01, e-post: info@autronicafire.no
**Regionskontor: Oslo** 23 28 70 00**, Moelv** 62 34 10 00**, Tønsberg** 33 33 19 30**, Notodden** 35 01 18 18,
**Bergen** 55 17 61 80**, Harstad** 77 00 25 50**, Stavanger** 51 84 09 00**, Haugesund** 52 83 88 50**, Kristiansand** 38 06 61 00

**Besøk Autronica Fire and Security AS sine nettsider: www.autronicafire.no**

# ID100

# Konvensjonell optisk røykdetektor

# Iris serie

**Generelt**

ID100 er en konvensjonell optisk røykdetektor. Hver enhet fra Iris serien identifiseres av et unikt fabrikktildelt serienummer. Dette muliggjør at parameter som sensitivitet og driftsmodus kan endres på hver enkelt detektor via ToolKit EDRV200.

Versa++ teknologien muliggjør disse detektorene til å bli konfigurert i samsvar med de påkrevde deteksjonsmetodene. Dette muliggjør at detektorene kan tilpasse seg perfekt til ytre forhold og indikere effektiv deteksjon ved hendelser.
Følgende parameter er tilgjengelig:

- Driftsmodus (Blinkende LED, blinkende parallell-lampe)
- Justering av optisk sensitivitet
- Manuell aktivering av LED
- Forespørsel om rapportering av feil
- Komplett diagnose

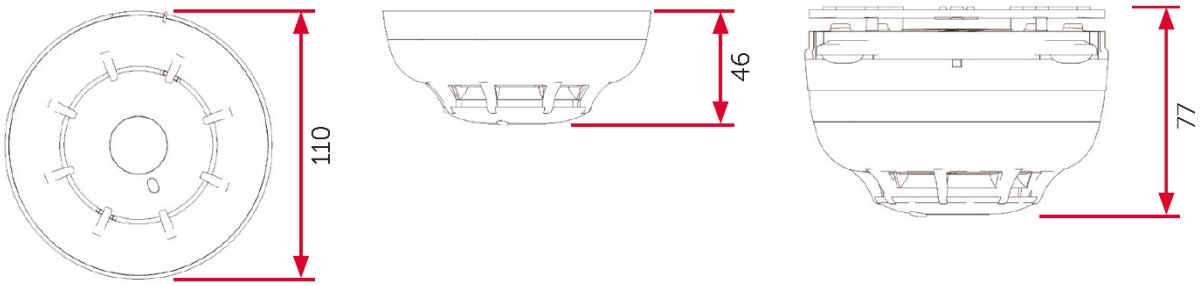
**Hovedfunksjoner**

- Innsektskjerm på 500µm hulldiasmeter
- To farger LED: Rød for alarm; grønn blinking for polling og grønt fast for manuelt aktivering av LED ToolKit.
- Versa++ teknologi
- Driftkompensering av sensor forårsaket av nedsmussing
- 4 ulike røyksensitivitet
- Komplett diagnose, lesing av nedsmussing og verdier i sanntid
- Husker siste 5 minutter av røykverdier fra siste alarm.

**Tekniske spesifikasjoner**

- Sertifisering: CPR EN54/Pt7-pt17
- Deteksjonsprinsipp: lysdiffusjon (Tyndall effekten)
- Alarmoverføringsmetode: uavhengig polling
- Identifikasjon for nedsmussing eller feil på detektor
- Prøvetaking: hvert 4 sekund
- Spenningsområdet: 19-30VDC
- Strømtrekk i normaldrift: 40µA
- Strømtrekk i alarm: max. 40mA
- Sensitivitet: 0.08 – 0.10 – 0.12 – 0.15 dB/m
- Omgivelsestemperatur: fra -5°C til +40°C
- Kapslingsgrad: IP40
- Sokkeltilkobling: Bajonettkobling
- Høyde med EB0010 sokkel: 46mm
- Høyde med summer/flash: 77mm
- Diameter: 110mm
- Art.nr. ID100 hvit: 100039
- Art.nr. ID100 svart: 101351

**Mål:**



# BEVEGELSESKDETEKTOR

Presence detector - Professional Line

# Hallway

V3.5 KNX - Concealed wiring
EAN 4007841 079086
Article number 079086


Hochfrequenz Sensor 360°


Max. 25 x 3 m


Montagehöhe max. 4 m


Vernetzbar via Bluetooth


Einstellungen via App


Temperatur

Luftfeuchte

KNX

## Function description

The cleverer hallway sensor knows more. Perfect radial detection up to 25 m – ideal for long corridors and hallways. Reach can be adjusted in both directions. Contemporary Control PRO II design. Featuring Bluetooth technology. Interfaces for COM1, COM2, DALI-2 APC, DALI-2 IPD, KNX, IP and BT IPD (Slave).

## Technical specifications

| | |
|---|---|
| Dimensions (L x W x H) | 67 x 103 x 103 mm |
| With motion detector | Yes |
| Manufacturer's Warranty | 5 years |
| Settings via | ETS software, Bluetooth, Bus |
| With remote control | No |
| Version | KNX - Concealed wiring |
| PU1, EAN | 4007841079086 |
| Type | Presence detector |
| Application, place | Indoors |
| Application, room | Indoors, corridor / aisle |
| Colour | white |
| Colour, RAL | 9003 |
| Includes corner wall mount | No |
| Installation site | ceiling |
| Installation | Ceiling, Concealed wiring |
| IP-rating | IP20 |
| Ambient temperature | -25 – 50 °C |

| | |
|---|---|
| Mounting height max. | 4,00 m |
| Optimum mounting height | 2,8 m |
| HF-system | 5,8 GHz |
| Detection | also through glass, wood and stud walls |
| Detection angle | Aisle, 360 ° |
| Angle of aperture | 140 ° |
| Sneak-by guard | Yes |
| Capability of masking out individual segments | No |
| Electronic scalability | Yes |
| Mechanical scalability | No |
| Reach, radial | 25 x 3 m (75 $m^2$) |
| Reach, tangential | 25 x 3 m (75 $m^2$) |
| Transmitter power | < 1 mW |
| Twilight setting | 10 – 1000 lx |
| Time setting | 10 s – 1092 Min. |
| Basic light level function | Yes |

Presence detector - Professional Line

# Hallway

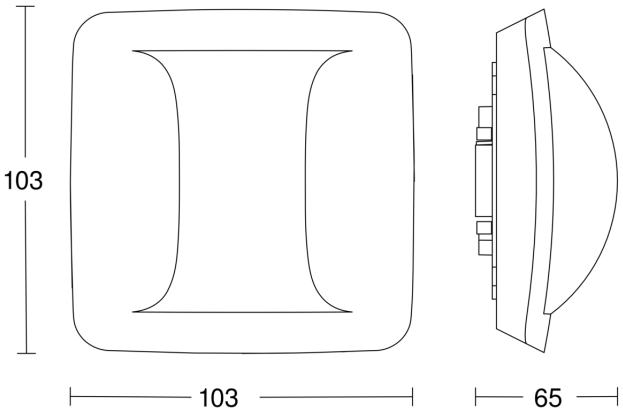
V3.5 KNX - Concealed wiring
EAN 4007841 079086
Article number 079086

## Technical specifications

| | |
|---|---|
| Material | Plastic |
| Mains power supply | 30 V |
| Power consumption | 0,7 W |
| Power supply, detail | KNX bus |
| With bus coupling | Yes |
| Technology, sensors | High frequency, Light sensor |
| Mounting height | 2 – 4 m |

| | |
|---|---|
| Main light adjustable | 0 - 100 % |
| Twilight setting TEACH | Yes |
| Constant-lighting control | Yes |
| KNX functions | Comfort, Photo-cell controller, Individual pyro evaluation, Basic light level function, Light level, HVAC output, Constant-lighting control, Light output 4x, Presence output, Day / night function, Dewpoint, Logic gate, Humidity output, Temperature output |
| Interconnection | Yes |
| Type of interconnection | Master/master, Master/slave |
| Interconnection via | KNX bus |
| Rated current | 30 mA |

## Dimension Drawing



Presence detector - Professional Line

# True Presence

V3.0 KNX - in-ceiling installation, white
EAN 4007841 079451
Article number 079451


Hochfrequenz Sensor 360°


Bewegung Ø 15 m


Präsenz Ø 15 m


True Presence Ø 9 m


Helligkeit


Luftfeuchte


Temperatur


KNX


2 - 12 m


2 - 2000 Lux

## Function description

The world's first true presence detector! No unnecessary stay-ON times any more – no unnecessary electricity costs. Precision high-frequency measurement of the surrounding area provides 100 per-cent reliable detection. The True Presence detector reliably identifies whether persons are present or absent over an area of 64 $m^2$ – on the basis of the body's micro movements as well as human vital functions, such as breathing in and out, or shoulder movement. The new standard in building automation.

## Technical specifications

| | |
|---|---|
| Dimensions (L x W x H) | 89 x 103 x 103 mm |
| With motion detector | Yes |
| Manufacturer's Warranty | 5 years |
| Settings via | ETS software, Bluetooth, Bus |
| With remote control | No |
| Version | KNX - in-ceiling installation, white |
| PU1, EAN | 4007841079451 |
| Type | Presence detector |
| Application, place | Indoors |
| Application, room | classroom, lecture hall, one-person office, open-plan office, high-bay warehouse, production facilities, conference room / meeting room, hotel room, care room, duty room, recreation room, dining hall / staff restaurant, changing room, kitchenette, sports hall, reception / lobby, WC / washroom, warehouse, Indoors |

| | |
|---|---|
| HF-system | 7,2 GHz |
| Detection | also through glass, wood and stud walls |
| Detection angle | 360 ° |
| Angle of aperture | 160 ° |
| Sneak-by guard | Yes |
| Capability of masking out individual segments | No |
| Electronic scalability | Yes |
| Mechanical scalability | No |
| Reach, radial | Ø 15 m (177 $m^2$) |
| Reach, tangential | Ø 15 m (177 $m^2$) |
| Reach, presence | Ø 15 m (177 $m^2$) |
| True Presence reach | Ø 9 m (64 $m^2$) |
| Transmitter power | < 1 mW |
| Twilight setting | 2 – 1000 lx |
| Time setting | 30 s – 1092 Min. |

Presence detector - Professional Line

# True Presence

V3.0 KNX - in-ceiling installation, white
EAN 4007841 079451
Article number 079451

## Technical specifications

| | |
|---|---|
| Colour | white |
| Colour, RAL | 9003 |
| Includes corner wall mount | No |
| Installation site | ceiling |
| Installation | In-ceiling installation, Ceiling |
| IP-rating | IP20 |
| Ambient temperature | 0 – 40 °C |
| Material | Plastic |
| Power supply, detail | KNX bus |
| With bus coupling | Yes |
| Technology, sensors | High frequency, Light sensor, Temperature, Air humidity |
| Mounting height | 2,00 – 12,00 m |
| Mounting height max. | 12,00 m |
| Optimum mounting height | 2,8 m |
| Montagehöhe max. True Presence Erfassung | 4,00 m |

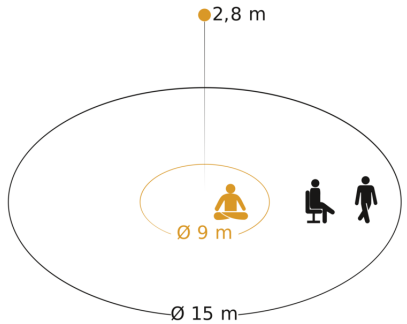
| | |
|---|---|
| Basic light level function | Yes |
| Main light adjustable | 0 - 100 % |
| Twilight setting TEACH | Yes |
| Constant-lighting control | Yes |
| KNX functions | Photo-cell controller, Basic light level function, Light level, HVAC output, Constant-lighting control, Light output 4x, Humidity output, Presence output, Day / night function, Dewpoint, Temperature output, Logic gate |
| Interconnection | Yes |
| Type of interconnection | Master/master, Master/slave |
| Interconnection via | KNX bus |
| Rated current | 30 mA |

Presence detector - Professional Line

# True Presence

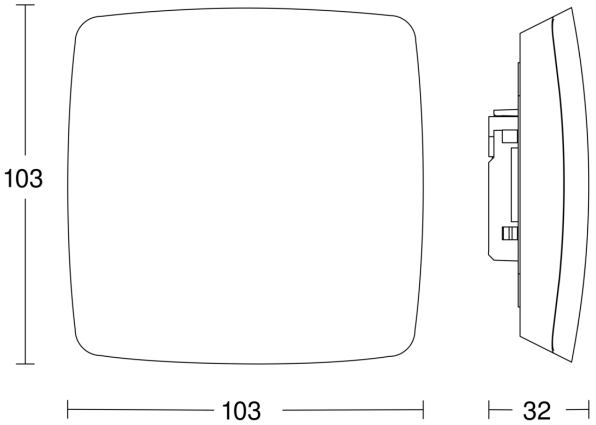
V3.0 KNX - in-ceiling installation, white
EAN 4007841 079451
Article number 079451

## Detection Zone

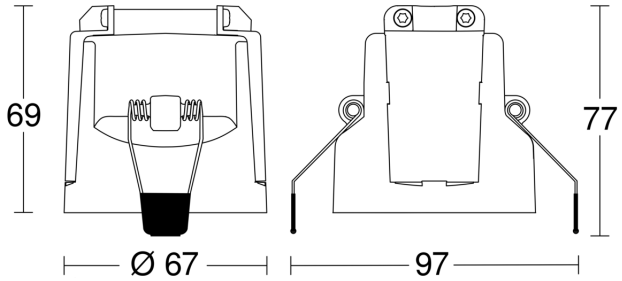



Possible mounting height: 2,00 m – 12,00 m
Orange: True Presence
Black: movement and presence

## Dimension Drawing 1




## Dimension Drawing 2



Presence detector - Professional Line

# IR Quattro MICRO 6m

V3 KNX - white
EAN 4007841 064129
Article number 064129

Infrarot-Sensor 360°

Max. 4 x 4 m Präsenz

KNX

IP65

2 - 1000 Lux

5 years

Herstellergarantie steinel-professional.de/garantie

CE

VDE

## Function description

Small sensor. Great performance. The IR Quattro MICRO meets the wish of many architects and planners for a sensor that's as inconspicuous as possible. It impresses with its compact size after installation, low overall height and a micro precision lens (15 x 15 mm). At the same time, the small 360° infrared presence puts on a great performance, covering 36 m$^2$. IP65 certification also makes it suitable for rooms exposed to moisture.

## Technical specifications

| | |
|---|---|
| Dimensions (Ø x H) | 43 x 71 mm |
| With motion detector | Yes |
| Manufacturer's Warranty | 5 years |
| Settings via | ETS software, Remote control, Bus, Smart Remote |
| With remote control | No |
| Version | KNX - white |
| PU1, EAN | 4007841064129 |
| Type | Presence detector |
| Application, place | Indoors |
| Application, room | one-person office, hotel room, care room, function room / ancillary room, WC / washroom, Indoors |
| Colour | white |
| Colour, RAL | 9003 |
| Includes corner wall mount | No |
| Installation site | ceiling |
| Installation | In-ceiling installation, Ceiling |

| | |
|---|---|
| Mounting height max. | 5,00 m |
| Optimum mounting height | 2,8 m |
| Detection angle | 360 ° |
| Angle of aperture | 90 ° |
| Sneak-by guard | Yes |
| Capability of masking out individual segments | No |
| Electronic scalability | No |
| Mechanical scalability | No |
| Reach, radial | 4 x 4 m (16 m$^2$) |
| Reach, tangential | 6 x 6 m (36 m$^2$) |
| Reach, presence | 4 x 4 m (16 m$^2$) |
| Switching zones | 168 switching zones |
| Twilight setting | 2 – 1000 lx |
| Time setting | 60 s – 255 Min. |
| Basic light level function | Yes |
| Main light adjustable | 0 - 100 % |

Presence detector - Professional Line

# IR Quattro MICRO 6m

V3 KNX - white
EAN 4007841 064129
Article number 064129

## Technical specifications

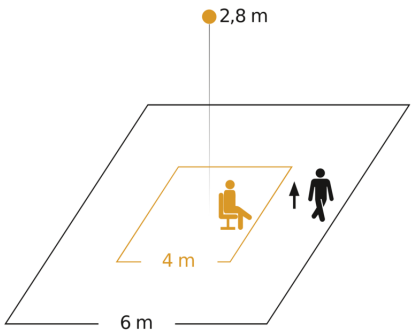
| | |
|---|---|
| IP-rating | IP65 |
| Ambient temperature | -25 – 55 °C |
| Material | Plastic |
| Mains power supply | 30 V |
| Power consumption | 0,5 W |
| Power supply, detail | KNX bus |
| With bus coupling | Yes |
| Technology, sensors | passive infrared, Light sensor |
| Mounting height | 2,00 – 5,00 m |

| | |
|---|---|
| Twilight setting TEACH | Yes |
| Constant-lighting control | Yes |
| KNX functions | Photo-cell controller, Basic light level function, Light level, HVAC output, Constant-lighting control, Day / night function, Presence output, Light output 4x, Logic gate |
| Interconnection | Yes |
| Type of interconnection | Master/master, Master/slave |
| Interconnection via | KNX bus |
| Rated current | 10 mA |

## Accessories

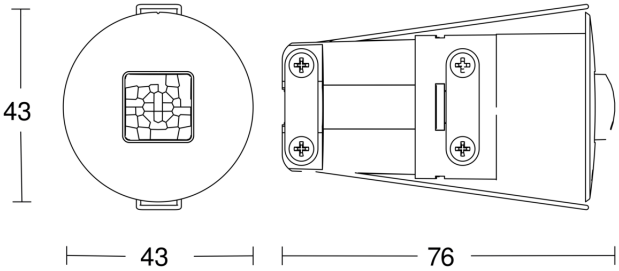
| | |
|---|---|
| EAN 4007841 593018 | Service remote control RC6 KNX |
| EAN 4007841 592912 | User remote control RC7 KNX |

## Detection Zone




Possible mounting height: 2,00 m - 5,00 m
Orange: presence
Black: tangential

## Dimension Drawing



# HØYTALER
# TALEVARSLING

EN 54 Sertifisert

# PC-2360EN

TAK-INNFELLINGSHØYTTALER

Takhøyttaleren PC-2360EN er en EN54-24 godkjent innfellingshøyttaler som er meget godt egnet for både tale og musikk. PC-2360EN er stilren høyttaler med flat front og passer inn i moderne innredninger. PC-2360EN er utstyrt med fjærklemmer for rask og enkel installasjon.

**Tekniske data.**

- Dimensjon (Diam. x D): 230 x 76 mm
- Utsparingsmål: 200 mm
- Matrialer, farge: Stålplate, RAL 9016, bakboks sort
- Vekt: 0,74 kg
- Støv- og vannbeskyttelse: Innendørs bruk
- Driftstempratur: -10 °C til +50 °C
- Sertifisert: EN 54-24
- Frekvensområde: 60 Hz – 20 kHz
- Følsomhet 1W/1m: 94dB (500 Hz – 5 kHz)
- Effekt: 6W (100V)
- Effekt tapping: 6W, 3W, 1,5W, 0,8W
- Levert med: Utskjæringsmal, strips x 2

**Scandec Systemer AS**
Postboks 622, 1411 Kolbotn
Trollåsveien 6, 1414 Kolbotn

Telefon: 66 81 27 00
post@scandec.no
www.scandec.no

# IKT

Det skal være mulig å plassere følgende i himling:

**WIFI-antenner** p.g.a. metallhimling. (Med mindre Sykehuspartner godkjenner over eller i støtterom)
**Mobilantenner** (Med mindre Sykehuspartner godkjenner over eller i støtterom)
**RFID-antenner** Antatt i liten grad, men ikke avklart. (Med mindre Sykehuspartner godkjenner over eller i støtterom)
**Pasientsignal-korridordisplay**, hvis dette blir løsningen.
**Kamera-Dome** etter soneplan for sikkerhet.

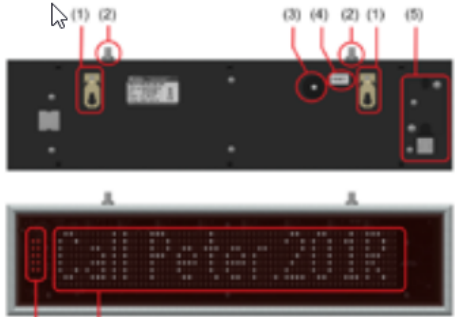
# RIIKT - Utstyr i himling

Det skal være mulig å plassere følgende i himling:

**WIFI-antenner** p.g.a. metallhimling. (Med mindre Sykehuspartner godkjenner over eller i støtterom)
**Mobilantenner** (Med mindre Sykehuspartner godkjenner over eller i støtterom)
**RFID-antenner** Antatt i liten grad, men ikke avklart. (Med mindre Sykehuspartner godkjenner over eller i støtterom)
**Pasientsignal-korridordisplay**, hvis dette blir løsningen.
**Kamera-Dome** etter soneplan for sikkerhet.

- Pasientsignal
  - Korridordisplay: 110 x 430 x 50

*Figure 1: Corridor display features and components*




- WiFi:
  - 250 x 250 x 60

- RFID
  - 250 x 150 x 65

- Mobil
  - 100 x 600 x 600

# SPRINKLERHODER

**Det skal leveres og monteres innfelte vandalsikre sprinklerhoder. Den ligger flush med himling og med tilsvarende farge som himling så vil den være lite synlig.**

# TECHNICAL DATA

**INSTITUTIONAL SPRINKLERS K5.6**

**The Viking Corporation, 210 N Industrial Park Drive, Hastings MI 49058**
**Telephone: 269-945-9501 Technical Services: 877-384-5464 Fax: 269-818-1680 Email: techsvcs@vikingcorp.com**
**Visit the Viking website for the latest edition of this technical data page www.vikinggroupinc.com**

## 1. DESCRIPTION

Viking Institutional Style Sprinklers are small, flush, solder link and lever sprinklers made with tamper-resistant construction. These flush-mount sprinklers can be ordered as Quick Response, Quick Response-Extended Coverage, and as Pendent or Horizontal Sidewall configurations. Additionally, the VK427 can be used as Standard Response (FM only). Viking institutional sprinklers have been specifically designed for use with concealed piping in institutional mental health occupancies, correctional facilities, or anywhere a likelihood of tampering with fire sprinklers by the occupants may exist.

The institutional sprinkler assembly consists of the sprinkler body and a 3 or 4 inch escutcheon plate. The sprinkler and escutcheon plate are available with a polished chrome or painted finish.

## 2. LISTINGS AND APPROVALS*

**cULus Listed**: Category VNIV

**FM Approved:** Class 2015 (VK427 ONLY)

* Refer to the Approval Charts and Design Criteria for requirements that must be followed.

***NOTICE***

**THE VIKING CORPORATION DISCLAIMS ANY RESPONSIBILITY FOR DAMAGES OR INJURY (INCLUDING DEATH) CAUSED BY THE OPERATION OR INOPERATION OF SPRINKLERS ARISING OUT OF THE MISUSE OF OR TAMPERING WITH VIKING BRAND SPRINKLERS INCLUDING, WITHOUT LIMITATION, ANY PERSONAL INJURY OR DEATH ARISING OUT OF OR CAUSED BY THE MANIPULATION OF, DISMANTLING OF, OR ATTEMPTED USE OF THE SPRINKLER OR ANY COMPONENT AS AN INSTRUMENT UNRELATED TO ITS INTENDED USE.**

## 3. TECHNICAL DATA

**Specifications:**
Minimum Operating Pressure: 7 psi (0.5 bar)
Rated to: 175 psi (12 bar) water working pressure.
Factory tested hydrostatically to 500 psi (34.5 bar).
Thread size: 1/2" NPT or 15 mm BSPT
Nominal K-factor: 5.6 U.S. (80.6 metric**)

**Metric K-factor measurement shown is in Bar. When pressure is measured in kPa, divide the metric K-factor shown by 10.0.

**Material Standards:**
Sprinkler Body: QM Brass
Deflector: Pendent - Copper UNS-C23000 or UNS-C51000, HSW - Copper UNS-C51000
Deflector Pins: Stainless Steel 302
Button: UNS-C36000
Compression Screw: Brass UNS-C36000
Fusible Link Assembly: UNS-C51910 and Eutectic Solder
Fusible Link Levers: Stainless Steel UNS-S31600
Lever Bar: Copper Alloy UNS-C72500
Belleville Spring Sealing Assembly: Nickel Alloy, coated on both sides with PTFE Tape
Seat: UNS-C31400 or UNS-C31600 Bronze 1/2 to full hard
Pin Ring: Pendent - Copper UNS-C23000, HSW - Copper UNS-C51000

**Ordering Information: (Refer to Table 1 and the current Viking List Price Book.)**

| SIN | THREAD | DESCRIPTION |
|---|---|---|
| VK426 | NPT | QR Pendent |
| VK650 | NPT | QR EC Pendent |
| VK427 | NPT | QR or SR[1] HSW |
| VK651 | NPT | QR EC HSW |
| VK426 | BSPT | QR Pendent |
| VK650 | BSPT | QR EC Pendent |
| VK427 | BSPT | QR or SR[1] HSW |
| VK651 | BSPT | QR EC HSW |

1. VK427 is FM Approved as Standard Response (SR)

**WARNING**: Cancer and Reproductive Harm- www.P65Warnings.ca.gov

VIKING®

**TECHNICAL DATA**

**INSTITUTIONAL SPRINKLERS K5.6**

**The Viking Corporation, 210 N Industrial Park Drive, Hastings MI 49058**
**Telephone: 269-945-9501 Technical Services: 877-384-5464 Fax: 269-818-1680 Email: techsvcs@vikingcorp.com**
**Visit the Viking website for the latest edition of this technical data page www.vikinggroupinc.com**

## TABLE 1: ORDERING INFORMATION

**INSTRUCTIONS:**

**Choose a sprinkler style and base part number then,**
**(1) add the suffix for the desired Finish**
**(2) add the suffix for the desired Temperature Rating.**
**(3) select an escutcheon plate and finish[4].**

| Style | Sprinkler Base Part Number | SIN | Size | | 1: Available Finishes | | 2: Available Temperature Ratings | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | NPT Inch | BSPT mm | Description | Suffix[1] | Nominal Rating | Max. Ambient Ceiling Temperature[3] | Suffix |
| QR Pendent | 19663 | VK426 | 1/2 | -- | Chrome | F | 165 °F (74 °C) | 100 °F (38 °C) | C |
| QR Pendent | 20110 | VK426 | -- | 15 | Painted white | M-/W | 205 °F (96 °C) | 150 °F (65 °C) | E |
| QR or SR[6] HSW | 22885 | VK427 | 1/2 | -- | Painted gray | M-/RAL9006 | | | |
| QR or SR[6] HSW | 22908 | VK427 | -- | 15 | **NOTE: The escutcheons are available with the same finishes as the sprinklers.** | | **3: Escutcheons[4]** | | |
| QR EC Pendent | 19876 | VK650 | 1/2 | -- | | | **Description** | **Base Part Number** | |
| QR EC Pendent | 20111 | VK650 | -- | 15 | | | 3” (75 mm) | 23196 | |
| QR EC HSW | 22884 | VK651 | 1/2 | -- | | | 4” (100 mm) | 23197 | |
| QR EC HSW | 22907 | VK651 | -- | 15 | | | | | |

**Examples**

**Sprinkler**: **19663MC/RAL9006** = VK426 Quick Response Pendent with Painted gray Finish and 165 °F (74 °C) Nominal temperature rating. This sprinkler is to be installed into an area with a maximum ambient temperature of 100 °F (38 °C) meaning if the area will experience temperatures above the maximum ambient rating, you shall use a higher temperature-rated sprinkler.

**Escutcheon**: **23196M/RAL9006** = 3” Diameter Escutcheon with Painted gray finish.

### Accessories

**Sprinkler Wrench (see Figure 1):** Socket Wrench: Part No. 22847MB[2]
**Retaining Flange (see Figure 1):** Part Numer 10599 (includes 1/8” allen head set screw[5])
**Sprinkler Cabinet:** Holds Up to 6 sprinklers: Part number 01731A

### Footnotes

1. Where a dash (-) is shown in the Finish suffix designation, insert the desired Temperature Rating suffix. See example above.
2. Requires a 1/2” ratchet which is not available from Viking.
3. Based on NFPA 13, NFPA 13R, and NFPA 13D. Other limits may apply, depending on fire loading, sprinkler location, and other requirements of the Authority Having Jurisdiction. Refer to specific installation standards.
4. The escutcheons are available with the same finishes as the sprinkler.
5. Requires a 1/8” allen wrench which is not available from Viking.
6. The VK427 is FM Approved as Standard Response. Refer the Approval Charts and design criteria for further details.

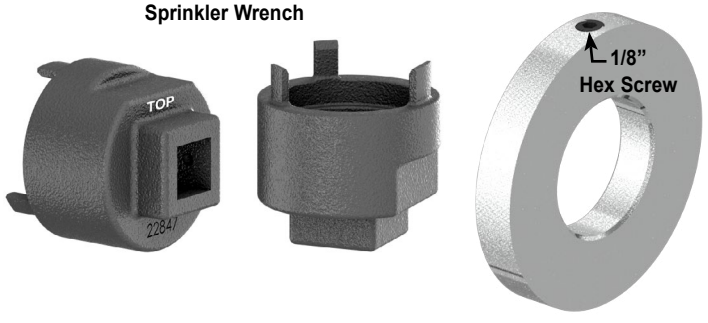



**Figure 1: Sprinkler Accessories**

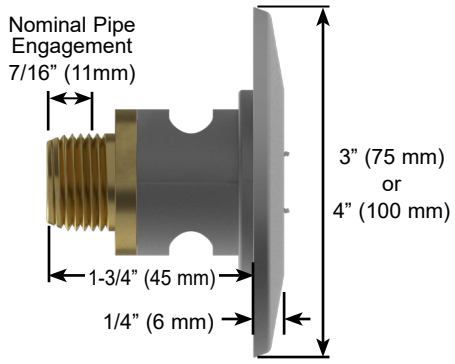



**Figure 2: Sprinkler Dimensions (Pendent and HSW)**

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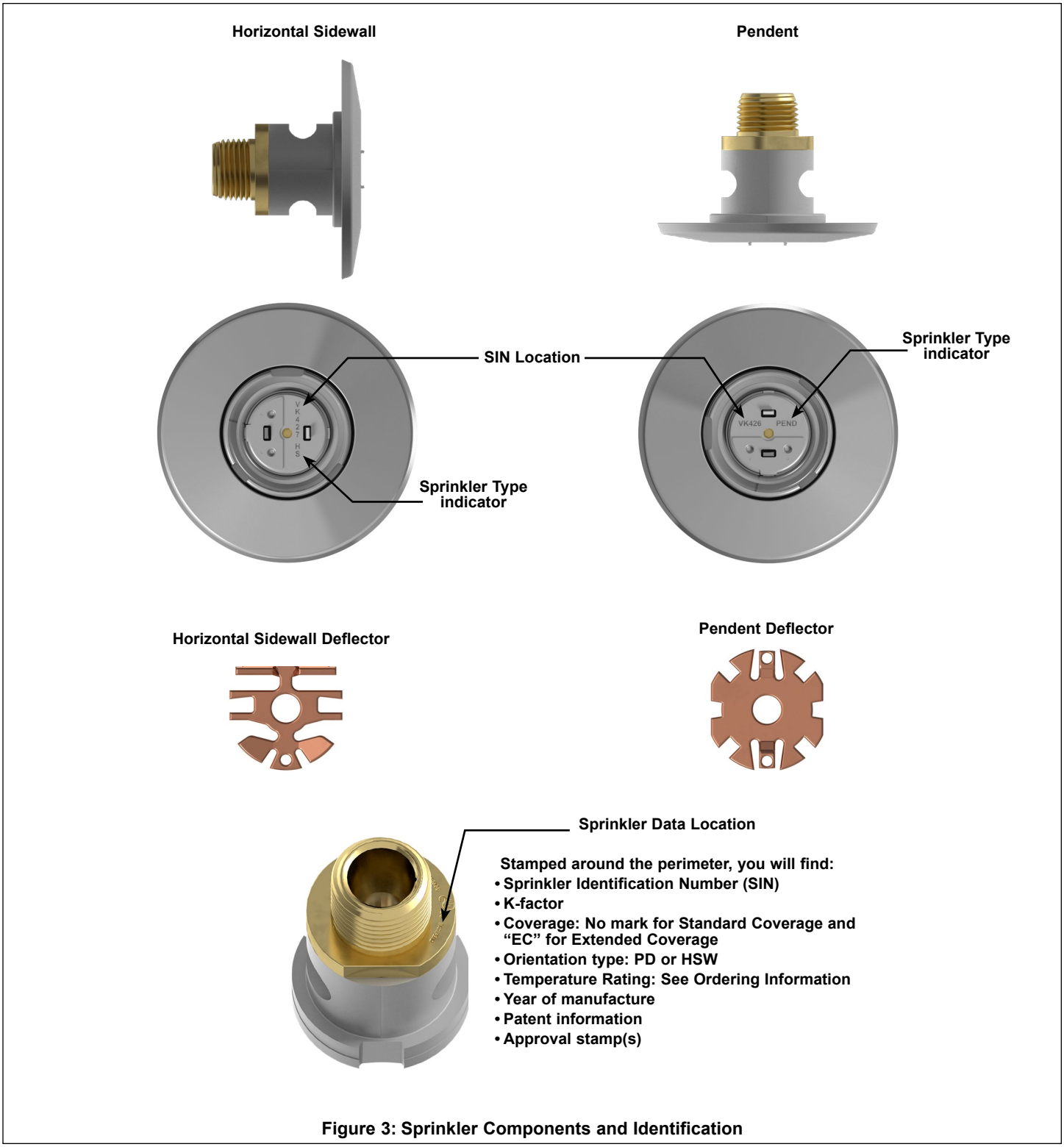


**Figure 3: Sprinkler Components and Identification**

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## 4. INSTALLATION

Refer to appropriate NFPA, FM Global, and/or any other applicable installation standards.

***NOTICES***

- **Sprinklers must be handled with care. They must be stored in a cool, dry place in their original shipping container. Never install sprinklers that have been dropped, damaged in any way, or exposed to temperatures in excess of maximum ambient temperature allowed. Such sprinklers should be destroyed immediately.**
- **Viking Institutional Sprinklers are not intended for use in corrosive environments. Use only sprinklers listed for corrosive environments when subject to corrosive atmospheres.**
- **Use care when locating sprinklers near fixtures that can generate heat. Do not install sprinklers where they will be exposed to temperatures that exceed the maximum recommended ambient temperature for the temperature rating used.**
- **Adequate heat must be provided when the Institutional Sprinklers are installed on wet-pipe systems.**
- **The sprinklers must be installed after the piping is in place to prevent mechanical damage. Before installing, be sure to have the appropriate sprinkler model and style, with the correct orifice size, temperature rating, and response characteristics.**

**⚠ WARNING**

**Viking sprinklers are manufactured and tested to meet the rigid requirements of the approving agency. The sprinklers are designed to be installed in accordance with recognized installation standards. Deviation from the standards or any alteration to the sprinkler after it leaves the factory including, but not limited to: painting, plating, coating, or modification, may render the sprinkler inoperative and will automatically nullify the approval and any guarantee made by The Viking Corporation. Flush sprinklers are decorative sprinklers and may be considered special purpose. As such, some Authorities may limit the use depending on the occupancy classification. Refer to the Authority Having Jurisdiction prior to installation.**

**General Information:**
The tamper-resistant design of the Viking Institutional Sprinklers is dependant upon proper installation as outlined in this document as well as proper piping design and installation. Proper installation ensures that the sprinkler assembly will be held in place by the force of the escutcheon pressing outward on the sprinkler body.

**Pay close attention to the instructions below when installing these sprinklers.**

Proper installation requires the following:

- The fitting in which the sprinkler is to be installed must be properly located according to the dimensions indicated below.
- The sprinkler fitting and drop nipple should be secured in place by installing the retaining flange as shown in the procedure below.
- The centerline of the fitting in which the sprinkler is to be installed must be perpendicular to the surface of the finished surface.
- Remove the sprinkler cap before placing the system into service.
- After installation, the entire system must be tested in accordance with recognized installation standards. The test is applied after sprinkler installation to ensure that no damage has occurred to the sprinkler during shipping and installation, and to make sure the unit has been properly tightened. If a thread leak occurs, normally the unit must be removed, new pipe-joint compound or tape applied, and then reinstalled. This is due to the fact that when the joint seal leaks, the sealing compound or tape is washed out of the joint

Tools and recommended supplies:

- PTFE Tape
- Institutional Sprinkler Wrench Part Number 22847M/B (requires a 1/2” socket wrench which is not available from Viking)
- 1/2” Ratchet wrench and (optional) extenstion
- 1/8” hex wrench (used for retaining flange hex screw; not available from Viking)
- Level
- Pliers

**INSTALLATION TIP:**

Prior to final installation, temporarily install all components described in the procedure below to verify the correct measurements have been achieved. If necessary, re-cut the supply drop nipple and repeat the procedure in order to achieve the correct measurements.

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Procedure:

**NOTE: If the retaining flange assembly is to be used, slide the flange over the sprinkler drop nipple prior to threading the nipple into the branch line tee. For an alternative bracing method, refer to Figure 8.**

1. Install all piping and cut the sprinkler drop nipple so that the ½" (15 mm) NPT outlet of the reducing coupling is at the correct elevation and centered in a 2" (50 mm) diameter opening in the ceiling.
2. Inspect the sprinkler assembly for damage.
3. Ensure the protective cap is on the sprinkler then apply a small amount of pipe-joint compound or tape (not shown) to the external threads of the sprinkler only, taking care not to allow a build-up of compound in the sprinkler inlet.
4. Install the escutcheon onto the sprinkler body as shown. DO NOT install the sprinkler without the escutcheon.
5. For HSW sprinklers Align the "TOP" marking on the wrench with the same marking on the protective cap. Place the sprinkler wrench over the protective cap on the sprinkler body.

   **NOTE: The wrench is uniquely designed to fit over the sprinkler cap and into the sprinkler in a specific alignment.**

6. Install the sprinkler into the fitting.

   **NOTE: The Escutcheon plate MUST be tight against the ceiling or wall.**

7. Tighten the sprinkler to approximately 7-14 ft-lbs.
8. If desired, use a level to ensure the HSW Institutional Sprinkler is in a horizontal position.

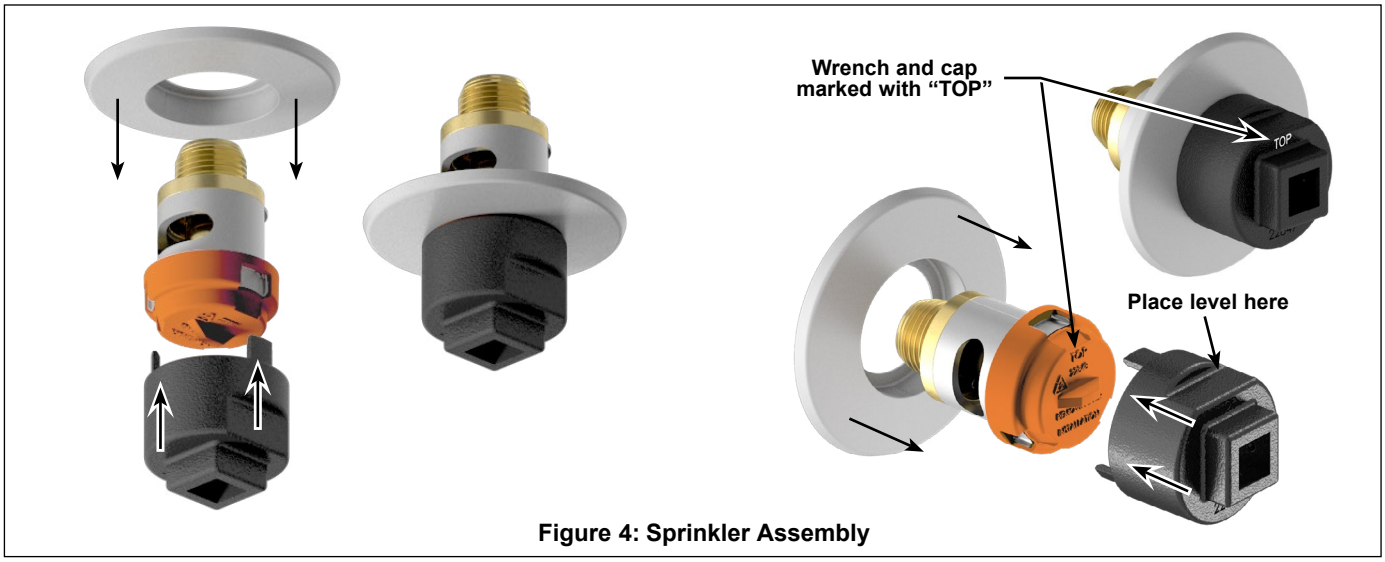


**Figure 4: Sprinkler Assembly**

9. To avoid damaging the sprinkler, carefully grasp the provided pull tab (manually or using pliers) and pull straight away from the sprinkler face to remove the protective cap.

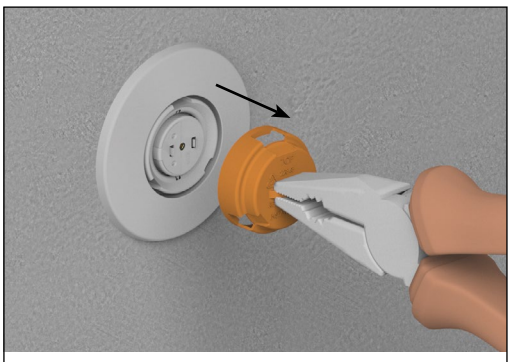

**Figure 5: Removing the Protective Cap**

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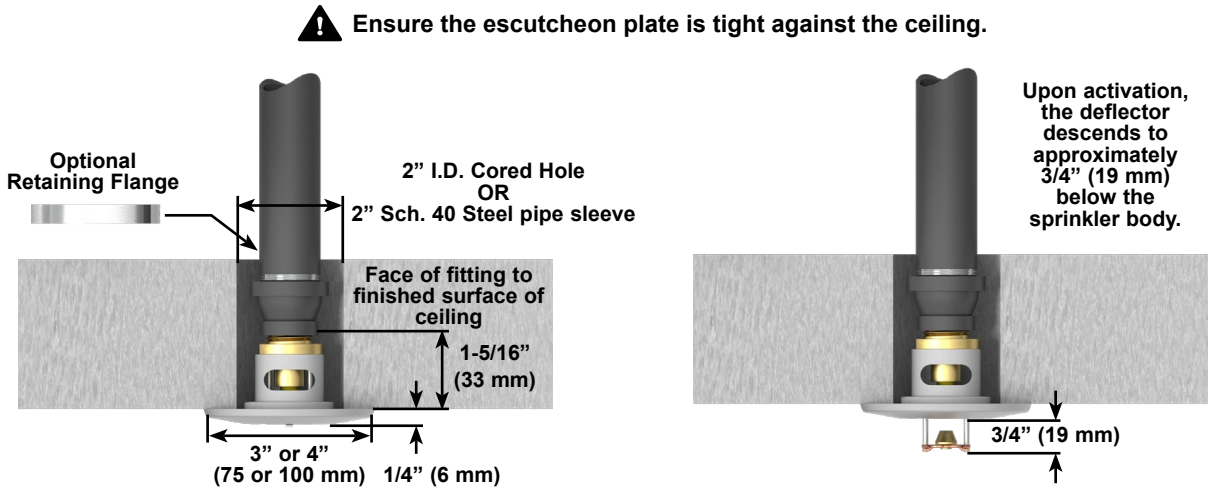


**Figure 6: Installation Dimensions - Pendent**

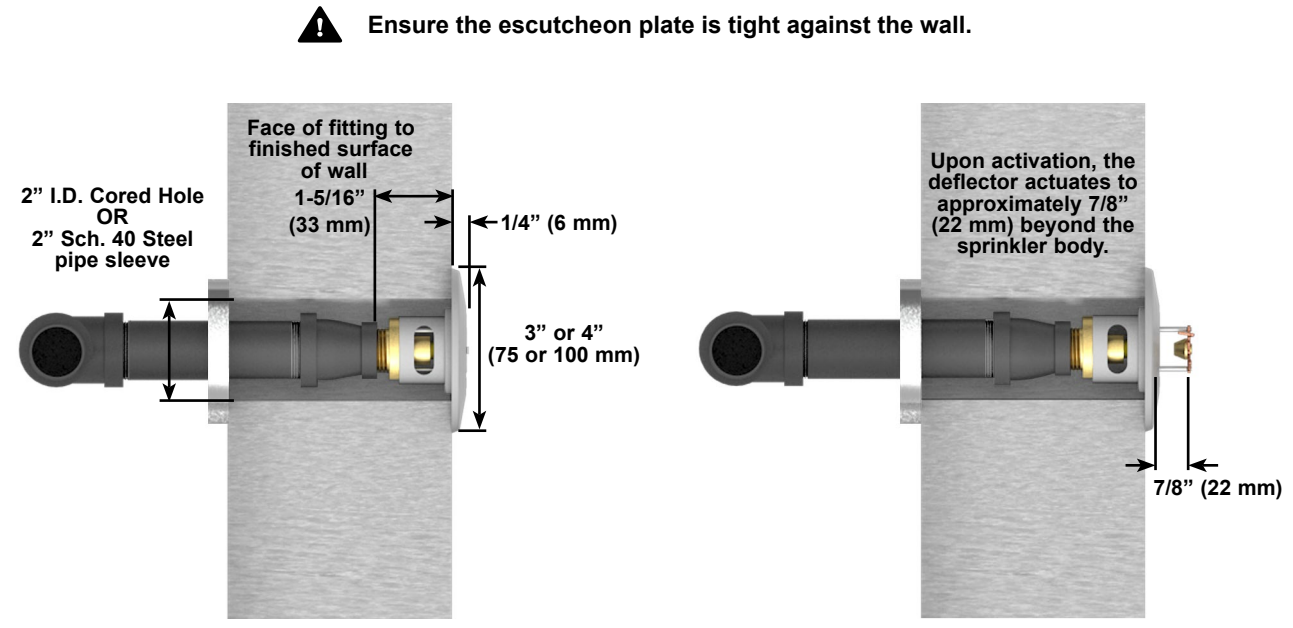


**Figure 7: Installation Dimensions - HSW**

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## 5. OPERATION

The sprinkler is recessed into the mounting surface, flush to the wall, with only a portion of the fusible link assembly exposed beyond the wall. The concealed deflector is held inside the sprinkler body until the eutectic metal solder link is fused. When the sprinkler fuses, the deflector extends to discharge and distribute water.
The special escutcheon plates shown on this document are the only escutcheon rings that may be used with these institutional sprinklers, and all of these sprinklers must be installed with an escutcheon plate.

The sprinkler piping behind the wall leading to the sprinkler must be secured to prevent any movement of the sprinkler. One method of anchoring the pipe behind the wall is to use the retaining flange and screw assembly that are available from Viking. The flange slides over the sprinkler nipple prior to threading the nipple into the tee.

## 6. INSPECTIONS, TESTS AND MAINTENANCE

***NOTICE***

**The owner is responsible for maintaining the fire protection system and devices in proper operating condition. For minimum maintenance and inspection requirements, refer to NFPA 25 for Inspection, Testing and Maintenance requirements. In addition, the Authority Having Jurisdiction may have additional maintenance requirements that must be followed.**

A. The sprinklers must be inspected on a regular basis for corrosion, mechanical damage, obstructions, paint, etc. The frequency of inspections may vary due to corrosive atmospheres, water supplies, and activity around the device.
B. Sprinklers that have been painted or mechanically damaged must be replaced immediately. Sprinklers showing signs of corrosion shall be tested and/or replaced immediately as required. Installation standards require sprinklers to be tested and, if necessary, replaced after a specified term of service. Refer to the installation standards and the Authority Having Jurisdiction for the specified period of time after which testing and/or replacement is required. Sprinklers that have operated cannot be reassembled or reused, but must be replaced. When replacing sprinklers, use only new sprinklers.
C. The sprinkler discharge pattern is critical for proper fire protection. Nothing should be hung from the sprinkler, attached to it, or otherwise obstruct the discharge pattern. All obstructions must be immediately removed or, if necessary, additional sprinklers installed.
D. When replacing existing sprinklers, the system must be removed from service. Refer to the appropriate system description and/or valve instructions. Prior to removing the system from service, notify all Authorities Having Jurisdiction. Consideration should be given to employment of a fire patrol in the affected area.

## 7. AVAILABILITY

Viking Institutional Sprinklers are available through a network of domestic and international distributors. See The Viking Corporation web site for the closest distributor or contact The Viking Corporation.

## 8. GUARANTEE

For details of warranty, refer to Viking's current list price schedule or contact Viking directly.

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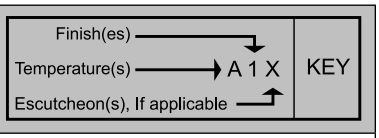
## APPROVAL CHART
## Viking Institutional Sprinklers




| Sprinkler Base Part Number[1] | SIN | Thread Size | | Listings and Approvals[2,4] | |
|---|---|---|---|---|---|
| | | NPT Inch | BSPT mm | cULus (Quick Response) | FM (Standard Response) |
| 19663 | VK426 | 1/2 | -- | A1 | - |
| 20110 | VK426 | -- | 15 | A1 | - |
| 22885 | VK427 | 1/2 | -- | A1 | A1 |
| 22908 | VK427 | -- | 15 | A1 | A1 |
| 19876 | VK650 | 1/2 | -- | A1 | - |
| 20111 | VK650 | -- | 15 | A1 | - |
| 22884 | VK651 | 1/2 | -- | A1 | - |
| 22907 | VK651 | -- | 15 | A1 | - |

**Approved Temperature Rating Codes:**
**A** = 165 °F (74 °C) and 205 °F (96 °C)

**Approved Finish Codes:**
**1** = Chrome, Painted White[3], and Painted Gray[3] (RAL9006)

**Footnotes**

1 Base Part number is shown. For complete part number, refer to Viking's current price schedule.
2 This table shows the listings and approvals available at the time of printing. Check with the manufacturer for any additional approvals.
3 Other colors are available upon request with the same Listings and Approvals as the standard colors.
4 Refer to the applicable cULus or FM Design Criteria in this document for further details.

## cULus LISTED FLOW RATES AND COVERAGE AREAS (LIGHT HAZARD) FOR
## Viking EXTENDED COVERAGE Institutional Sprinklers

| Sprinkler Base Part Number[1] | SIN | Thread Size | | cULus Listed Flows and Pressures | | | | |
|---|---|---|---|---|---|---|---|---|
| | | NPT Inch | BSPT mm | Coverage Area Ft x Ft. (m x m) | Minimum Flow[1] GPM (Lpm) | Minimum Pressure[2] PSI (bar) | Deflector to Ceiling Distance Inches (mm) | Minimum Spacing Ft. (m) |
| 19876 | VK650 | 1/2 | -- | 16 x 16 (4,9 x 4,9) | 26 (96) | 21.6 (1,49) | Flush[3] | 8 (2,4) |
| 20111 | VK650 | -- | 15 | 16 x 16 (4,9 x 4,9) | 26 (96) | 21.6 (1,49) | Flush[3] | 8 (2,4) |
| 22884 | VK651 | 1/2 | -- | 16 x 16 (4,9 x 4,9) | 26 (96) | 21.6 (1,49) | 4 to 12 (102 to 304) | 8 (2,4) |
| 22907 | VK651 | -- | 15 | 16 x 16 (4,9 x 4,9) | 26 (96) | 21.6 (1,49) | 4 to 12 (102 to 304) | 8 (2,4) |

**Footnotes**

1 Based on the minimum flow in GPM (lpm) from each sprinkler.
2 Based on Nominal K-factor.
3 The sprinkler face protrudes downward from the ceiling 1/4" (6 mm). See Figure 6.

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## DESIGN CRITERIA - UL

### STANDARD COVERAGE PENDENT
**cULus Listing Requirements:**

The sprinkler VK426 is cULus Listed as a Quick Response, Flush, Pendent Sprinkler as indicated in the Approval Chart for installation in accordance with the latest edition of NFPA 13. The following requirements must be followed:

- Designed for use in Light and Ordinary Hazard occupancies.
- The sprinkler must be installed in the pendent position in fixed fire protection systems (wet, dry, deluge, or preaction systems).
- Protection areas and maximum spacing shall be in accordance with the tables provided in NFPA 13.
- Minimum spacing allowed is 6 ft. (1.8 m) unless baffles are installed in accordance with NFPA 13.
- Minimum distance from walls is 4 in. (100 mm).
- Maximum distance from walls shall be no more than one-half of the allowable distance between sprinklers. The distance shall be measured perpendicular to the wall.
- The sprinkler installation and obstruction rules contained in NFPA 13 for standard coverage pendent spray sprinklers must be followed.

### EXTENDED COVERAGE PENDENT
**cULus Listing Requirements:**

The sprinkler VK650 is cULus Listed as an Extended Coverage, Quick Response, Flush, Pendent Sprinkler as indicated in the Approval Chart for installation in accordance with the latest edition of NFPA 13. The following requirements must be followed:

- Designed for use in Light Hazard occupancies only.
- The sprinkler must be installed in the pendent position in fixed fire protection systems (wet, dry, deluge, or preaction systems).
- Minimum spacing allowed is 8 ft. (2.4 m) unless baffles are installed in accordance with NFPA 13.
- Maximum protection area allowed is 16' x 16' (4.9 m x 4.9 m).
- Minimum distance from walls is 4 in. (100 mm).
- Maximum distance from walls shall be no more than one-half of the allowable distance between sprinklers. The distance shall be measured perpendicular to the wall.
- The sprinkler installation and obstruction rules contained in NFPA 13 for extended coverage pendent spray sprinklers must be followed.

### STANDARD COVERAGE HORIZONTAL SIDEWALL
**cULus Listing Requirements:**

The sprinkler VK427 is cULus Listed as a Quick Response, Flush, Horizontal Sidewall Sprinkler as indicated in the Approval Chart for installation in accordance with the latest edition of NFPA 13. The following requirements must be followed:

- Designed for use in Light and Ordinary Hazard occupancies below smooth, flat, horizontal ceilings.
- The sprinkler must be installed in the horizontal sidewall position in fixed fire protection systems (wet, dry, deluge, or preaction systems).
- Orient the top of the deflector parallel with the ceiling. The wrench is marked with the word "top".
- Must be located with deflector 4" to 12" (102 mm to 304 mm) below the ceiling, and flush with the wall in which they are installed.
- Protection areas and maximum spacing shall be in accordance with the tables provided in NFPA 13.
- Minimum spacing allowed is 6 ft. (1.8 m) unless baffles are installed in accordance with NFPA 13.
- Minimum distance from end walls is 4 in. (102 mm).
- Maximum distance from end walls shall be no more than one-half of the allowable distance between sprinklers. The distance shall be measured perpendicular to the wall.
- The sprinkler installation and obstruction rules contained in NFPA 13 for standard coverage sidewall spray sprinklers must be followed.

### EXTENDED COVERAGE HORIZONTAL SIDEWALL
**cULus Listing Requirements:**

The sprinkler VK651 is cULus Listed as an Extended Coverage, Quick Response, Flush, Horizontal Sidewall Sprinkler as indicated in the Approval Chart for installation in accordance with the latest edition of NFPA 13. The following requirements must be followed:

- Designed for use in Light Hazard occupancies only below smooth, flat, horizontal ceilings.
- The sprinkler must be installed in the horizontal sidewall position in fixed fire protection systems (wet, dry, deluge, or preaction systems).
- Orient the top of the deflector parallel with the ceiling. The wrench is marked with the word "top".
- Must be located with deflector 4" to 12" (102 mm to 304 mm) below the ceiling, and flush with the wall in which they are installed.
- Maximum protection area allowed is 16' x 16' (4.9 m x 4.9 m).
- Maximum spacing shall be in accordance with the tables provided in NFPA 13.
- Minimum spacing allowed is 8 ft. (2.4 m) unless baffles are installed in accordance with NFPA 13.
- Minimum distance from end walls is 4 in. (102 mm).
- Maximum distance from end walls shall be no more than one-half of the allowable distance between sprinklers. The distance shall be measured perpendicular to the wall.
- The sprinkler installation and obstruction rules contained in NFPA 13 for extended coverage sidewall spray sprinklers must be followed.

**IMPORTANT: Always refer to Form No. F_091699 - Care and Handling of Sprinklers. Also refer to Form No. F_080614 for general care, installation, and maintenance information. Viking sprinklers are to be installed in accordance with the latest edition of Viking Technical Data, the appropriate standards of NFPA, LPCB, APSAD, VdS or other similar organizations, and also with the provisions of governmental codes, ordinances, and standards, whenever applicable.**

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## DESIGN CRITERIA - FM

**FM Approval Requirements:**
The Viking Standard Response Horizontal Sidewall Sprinkler VK427 is FM Approved as standard response sidewall Non-Storage sprinkler, as indicated in the FM Approval Guide. For specific application and installation requirements, reference the latest applicable FM Loss Prevention Data Sheets (including 2-0) and Technical Advisory Bulletins. FM Global Loss Prevention Data Sheets and Technical Advisory Bulletins contain guidelines relating to, but not limited to: minimum water supply requirements, hydraulic design, ceiling slope and obstructions, minimum and maximum allowable spacing, and deflector distance below the ceiling.

**NOTE: The FM installation guidelines may differ from cULus and/or NFPA criteria**

**IMPORTANT: Always refer to Form No. F_091699 - Care and Handling of Sprinklers. Also refer to Form No. F_080614 for general care, installation, and maintenance information. Viking sprinklers are to be installed in accordance with the latest edition of Viking Technical Data, the appropriate standards of NFPA, LPCB, APSAD, VdS or other similar organizations, and also with the provisions of governmental codes, ordinances, and standards, whenever applicable.**

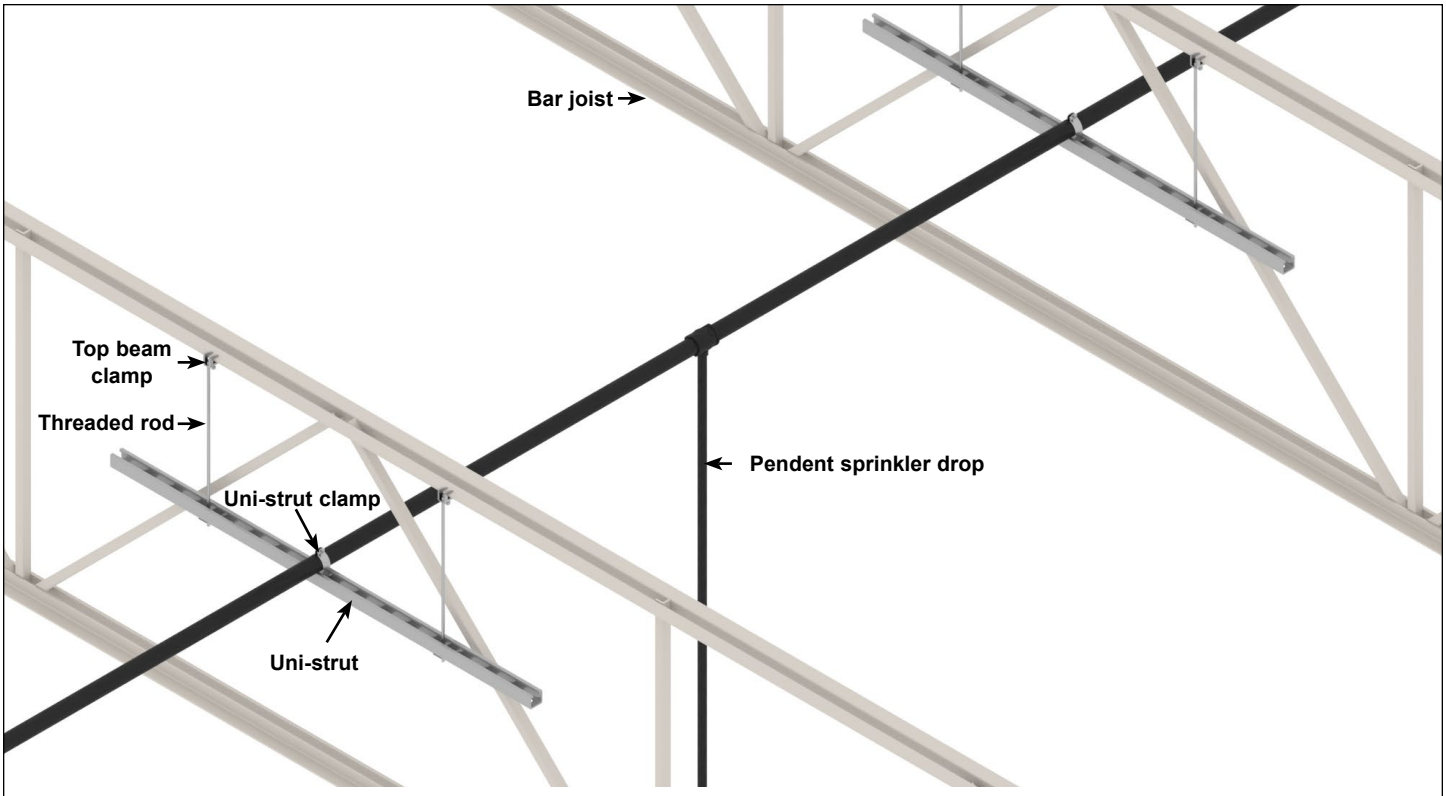



**Figure 8: Alternative Bracing Method**

### *NOTICE*

**Specific situations and conditions may exist that require alternative bracing methods to be used. Additional bracing methods may also be used; the material(s) used must not break down, drip, over-spray, or otherwise interfere with or impede the operation of the sprinkler—especially during fire conditions.**

# TILLUFTS- OG AVTREKKSVENTILER

**Det skal monteres tillufts- og avtrekksventiler som er av robust utførelse. Dette kan være et spesialprodukt, som vist under, eller at det brukes en ordinær rist som festes fast i himling med ekstra sett skruer.**

### ROBUST Sirkulær tilluft- og fraluftsventil

- Robust konstruksjon
- Til- eller fraluft
- Enkel montering i tak
- Ledeskinneperforering
- Kan brukes med plenumskammer ALS
- Standardfarge Hvit RAL 9003
  - 5 alternative standardfarger
  - Andre farger på forespørsel

# ROC

## ROBUST Sirkulær til- og fraluftsventil

## HURTIGFAKTA

- Robust konstruksjon
- Tilluft eller fraluft
- Enkelt montasje i tak
- Ledeskinneperforering
- Kan brukes med anslutningskammer ALS
- Standardfarge Hvit RAL 9003
  - 5 alternative standardfarger
  - Andre farger på forespørsel

| LUFTMENGDE – LYDTRYKK ROM (Lp10A) *) | | | | | | | |
|---|---|---|---|---|---|---|---|
| ROC Størrelse | | 25 dB(A) | | 30 dB(A) | | 35 dB(A) | |
| | | l/s | m³/h | l/s | m³/h | l/s | m³/h |
| 100 | | 22 | 79 | 26 | 94 | 29 | 104 |
| 125 | | 32 | 115 | 36 | 130 | 42 | 151 |
| 160 | | 47 | 169 | 54 | 194 | 63 | 227 |
| 200 | | 77 | 277 | 88 | 317 | 100 | 360 |
| 250 | | 108 | 389 | 123 | 443 | 140 | 504 |
| 315 | | 150 | 540 | 175 | 630 | 205 | 738 |
| 400 | | 209 | 752 | 242 | 871 | 280 | 1008 |
| ROC Størrelse | ALS Størrelse | 25 dB(A) | | 30 dB(A) | | 35 dB(A) | |
| | | l/s | m³/h | l/s | m³/h | l/s | m³/h |
| 100 | 80-100 | 15 | 54 | 18 | 65 | 21 | 76 |
| 125 | 100-125 | 24 | 86 | 27 | 97 | 32 | 115 |
| 160 | 125-160 | 35 | 126 | 41 | 148 | 47 | 169 |
| 200 | 160-200 | 59 | 212 | 68 | 245 | 78 | 281 |
| 250 | 200-250 | 86 | 310 | 100 | 360 | 115 | 414 |
| 315 | 250-315 | 120 | 432 | 139 | 500 | 161 | 580 |
| 400 | 315-400 | 174 | 626 | 202 | 727 | 234 | 842 |

**) $L_{p10A}$ = Lydtrykk inkl. A-filter med 4 dB romdemping og 10 m2 romabsorbsjons-område.*

*Den nederste tabellen viser data for tilluft ved åpent spjeld når plenumskammer ALS benyttes.*

Swegon

# Teknisk beskrivelse

## Utførelse

Sirkulær perforert tilluftsventil bestående av to deler, sprederdelsboks og spreder. Sprederdelen er ledeskinneperforert i et sirkulært mønster. Sprederdelen festes i sprederdelsboksen i standard utførelse med popnagler i stål, som forhindrer åpning av ventilen.

## Materiale og overflatebehandling

Sprederdel og sprederdelsboksen er laget av 1,5 mm:s stålplate.

- Standardfarge:
  - Hvit halvblank, glans 40, RAL 9003/NCS S 0500-N
- Alternative standardfarger:
  - Sølv blank, glans 80, RAL 9006
  - Grå aluminium blank, glans 80, RAL 9007
  - Hvit halvblank, glans 40, RAL 9010
  - Svart halvblank, glans 35, RAL 9005
  - Grå halvmatt, glans 30, RAL 7037
- Ulakkert og andre fargenyanser på forespørsel

## Tilbehør

**Trykfordelingsboks:**

ALS: Laget av forsinket stålplate. Inneholder demonterbart innreguleringsspjeld, fast måleuttak samt lydabsorbent medforsterket overflateskikt, brannklasse B-s1,d0 iht. EN ISO 11925-2.

## Prosjektering/Montering

Sprederdelsboksen skrus fast mot taket eller veggen slik at dens bakside ligger tett mot underlaget. Innløpsstussen festes til kanal med popnagler.

Når anslutningskammer ALS brukes, skal denne festes mot-bygningskonstruksjonen med pendel eller montasjebånd. Avstanden mellom anslutningskammer ALS og ventil kan forlenges opp til 500 mm uten at måleslange og spjeldregulering må forlenges. Etter innregulering skal sprederdelen festes i sprederdelsboksen med popnagler i stål.

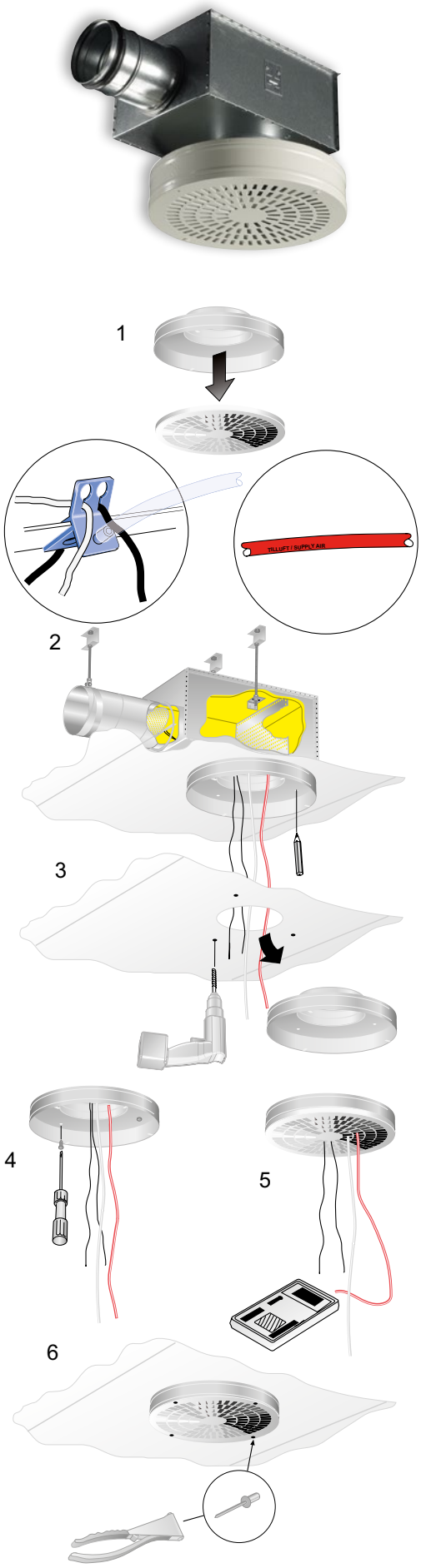
## Innregulering med ALS

Skal gjøres med sprederdelen montert. Måleslange og spjeldregulering dras ut gjennom sprederdelens perforering. Manometer kobles til måleslange. Ved hjelp av ventilens k-faktor kan ønsket innreguleringstrykk regnes ut. Spjeldet stilles inn i korrekt posisjon. Får å låse innstilt spjeldposisjon festes spjeldreguleringen med låseskrue i sprederdelsboksens tak. Se figur1.

K-faktor finnes angitt på produktets merking, samt også i gjeldende innreguleringsanvisning som kan hentes på vår hjemmeside på Internett.

## Vedlikeholdelse

Ventilen rengjøres ved behov med lunkent vann tilsatt såpe.Tilgjengelighet til kanalsystemet er mulig ved å bore ut popnaglene, deretter skru sprederdelen ut. Dersom anslutningskammer ALS blir benyttet slås fordelingsplaten til side og spjeldenheten tas enkelt ut av festet.




*Figur 1. ROC + ALS.*

# Dimensjonering

- Lydtrykknivå dB(A) gjelder for rom med 10 $m^2$ ekvivalent lydabsorpsjonsareal.
- Lyddemping (ΔL) vises i oktavbånd. Utløpsdemping er inkludert i verdiene
- Kastelengde $l_{0,2}$ er målt ved isotermisk innblåsning.
- Anbefalt maks undertemperatur er 10 K.
- For beregning av luftstrålens utbredels, lufthastigheter i oppholdssonen eller lydnivåer i rom med andre dimensjoner, henvises det til vårt beregningsprogram ProAir web som finnes tilgjengelig på vår hjemmeside på Internett.

$L_W$ = Lydeffektnivå

$L_{p10A}$ = Lydtrykknivå dB (A)

$K_{ok}$ = Korreksjon for utarbeiding av $L_W$-verdier i oktavbånd

$L_W = L_{p10A} + K_{OK}$ gir frekvensoppdeling oktavbånd

## Lyddata

### ROC – Tilluft

**Lydeffektnivå $L_w$(dB)**
**Tabell $K_{OK}$**

| Størrelse | Midtfrekvens (oktavbånd) Hz | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| ROC | 63 | 125 | 250 | 500 | 1000 | 2000 | 4000 | 8000 |
| 100 | -3 | -10 | -5 | 0 | 2 | -6 | -18 | -22 |
| 125 | -12 | 0 | 1 | 2 | 1 | -12 | -22 | -21 |
| 160 | -11 | -3 | 0 | 2 | 2 | -15 | -23 | -22 |
| 200 | -5 | 0 | 0 | 0 | 2 | -9 | -24 | -27 |
| 250 | -3 | 0 | 1 | 1 | 2 | -9 | -21 | -20 |
| 315 | -4 | -2 | 4 | 2 | 0 | -10 | -19 | -20 |
| 400 | 0 | -2 | 4 | 3 | 0 | -12 | -20 | -19 |
| Størrelse | Midtfrekvens (oktavbånd) Hz | | | | | | | |
| ROC + ALS | 63 | 125 | 250 | 500 | 1000 | 2000 | 4000 | 8000 |
| 100 | -7 | 4 | 2 | 1 | -1 | -7 | -15 | -18 |
| 125 | -5 | 5 | 5 | 2 | -1 | -10 | -18 | -21 |
| 160 | -3 | 3 | 4 | 1 | 0 | -9 | -17 | -21 |
| 200 | -2 | 4 | 5 | 2 | -2 | -10 | -17 | -21 |
| 250 | -4 | 6 | 4 | 3 | -3 | -10 | -16 | -19 |
| 315 | -1 | 4 | 3 | 3 | -2 | -11 | -18 | -20 |
| 400 | 0 | 5 | 3 | 3 | -1 | -10 | -17 | -20 |
| Tol. ± | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |

**Lyddempning ΔL(dB)**
**Tabell ΔL**

| Størrelse | Midtfrekvens (oktavbånd) Hz | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| ROC | 63 | 125 | 250 | 500 | 1000 | 2000 | 4000 | 8000 |
| 100 | 22 | 17 | 13 | 8 | 4 | 4 | 1 | 0 |
| 125 | 20 | 15 | 10 | 5 | 3 | 5 | 5 | 4 |
| 160 | 19 | 14 | 9 | 4 | 3 | 5 | 5 | 4 |
| 200 | 19 | 14 | 8 | 3 | 3 | 4 | 5 | 5 |
| 250 | 16 | 11 | 5 | 4 | 2 | 3 | 4 | 4 |
| 315 | 14 | 9 | 4 | 2 | 2 | 2 | 3 | 3 |
| 400 | 13 | 8 | 4 | 1 | 0 | 0 | 0 | 0 |
| Størrelse | Midtfrekvens (oktavbånd) Hz | | | | | | | |
| ROC + ALS | 63 | 125 | 250 | 500 | 1000 | 2000 | 4000 | 8000 |
| 100 | 22 | 16 | 12 | 17 | 22 | 16 | 11 | 15 |
| 125 | 21 | 16 | 9 | 17 | 23 | 16 | 11 | 13 |
| 160 | 19 | 14 | 10 | 17 | 19 | 12 | 10 | 12 |
| 200 | 16 | 11 | 8 | 16 | 18 | 12 | 11 | 11 |
| 250 | 13 | 8 | 8 | 16 | 17 | 12 | 12 | 13 |
| 315 | 11 | 6 | 7 | 19 | 14 | 10 | 10 | 13 |
| 400 | 10 | 5 | 8 | 14 | 11 | 10 | 11 | 12 |
| Tol. ± | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |

### ROC – Fraluft

**Lydeffektnivå $L_w$(dB)**
**Tabell $K_{OK}$**

| Størrelse | Midtfrekvens (oktavbånd) Hz | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| ROC | 63 | 125 | 250 | 500 | 1000 | 2000 | 4000 | 8000 |
| 100 | -6 | 5 | 0 | 0 | 2 | -8 | -16 | -20 |
| 125 | -6 | 5 | 0 | 0 | 2 | -8 | -16 | -20 |
| 160 | -4 | 4 | 0 | 0 | 2 | -7 | -15 | -20 |
| 200 | 4 | 8 | 2 | 0 | 0 | -5 | -14 | -18 |
| 250 | 1 | 3 | 3 | 1 | 0 | -4 | -13 | -17 |
| 315 | -3 | -1 | 2 | 2 | 0 | -6 | -15 | -18 |
| 400 | 2 | 2 | 3 | 3 | 0 | -7 | -16 | -18 |
| Størrelse | Midtfrekvens (oktavbånd) Hz | | | | | | | |
| ROC+ ALS | 63 | 125 | 250 | 500 | 1000 | 2000 | 4000 | 8000 |
| 100 | -9 | 9 | 5 | 1 | -4 | -7 | -11 | -18 |
| 125 | -9 | 7 | 9 | 2 | -6 | -8 | -15 | -21 |
| 160 | -6 | 11 | 8 | 1 | -6 | -7 | -14 | -21 |
| 200 | -2 | 11 | 7 | 0 | -6 | -8 | -15 | -24 |
| 250 | 0 | 10 | 6 | -3 | -5 | -8 | -14 | -22 |
| 315 | 0 | 10 | 6 | -2 | -4 | -8 | -14 | -22 |
| 400 | -1 | 6 | 1 | -1 | -2 | -7 | -15 | -24 |
| Tol. ± | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |

**Lyddempning ΔL(dB)**
**Tabell ΔL**

| Størrelse | Midtfrekvens (oktavbånd) Hz | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| ROC | 63 | 125 | 250 | 500 | 1000 | 2000 | 4000 | 8000 |
| 100 | 22 | 17 | 13 | 8 | 4 | 4 | 1 | 0 |
| 125 | 20 | 15 | 10 | 5 | 3 | 5 | 5 | 4 |
| 160 | 19 | 14 | 9 | 4 | 3 | 5 | 5 | 4 |
| 200 | 19 | 14 | 8 | 3 | 3 | 4 | 5 | 5 |
| 250 | 16 | 11 | 5 | 4 | 2 | 3 | 4 | 4 |
| 315 | 14 | 9 | 4 | 2 | 2 | 2 | 3 | 3 |
| 400 | 13 | 8 | 4 | 1 | 0 | 0 | 0 | 0 |
| Størrelse | Midtfrekvens (oktavbånd) Hz | | | | | | | |
| ROC + ALS | 63 | 125 | 250 | 500 | 1000 | 2000 | 4000 | 8000 |
| 100 | 22 | 16 | 12 | 17 | 22 | 16 | 11 | 15 |
| 125 | 21 | 16 | 9 | 17 | 23 | 16 | 11 | 13 |
| 160 | 19 | 14 | 10 | 17 | 19 | 12 | 10 | 12 |
| 200 | 16 | 11 | 8 | 16 | 18 | 12 | 11 | 11 |
| 250 | 13 | 8 | 8 | 16 | 17 | 12 | 12 | 13 |
| 315 | 11 | 6 | 7 | 19 | 14 | 10 | 10 | 13 |
| 400 | 10 | 5 | 8 | 14 | 11 | 10 | 11 | 12 |
| Tol. ± | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |

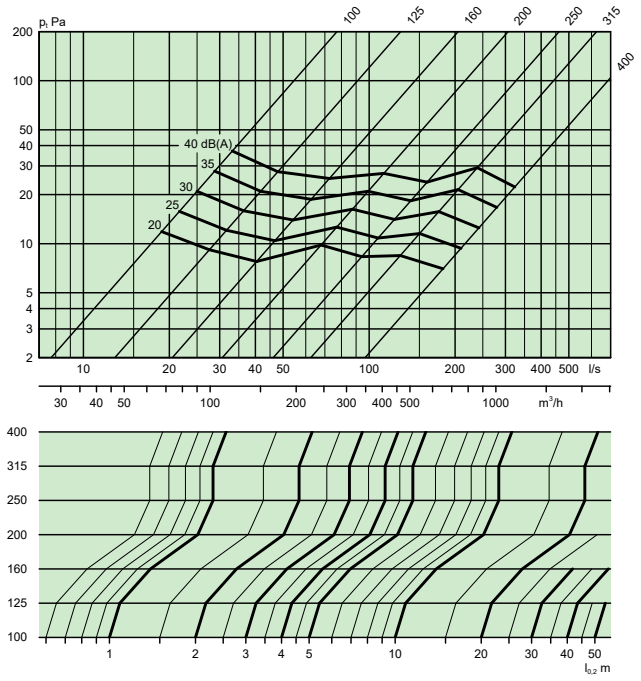
# Dimensjoneringsdiagram

**Luftmengde - Trykkfall – Lydnivå - Kastelengde**

- dB(A) gjelder for normaldempet rom, 4 dB romdemping/10 m² ekvivalent romabsorpsjonsareal.
- Kastelengde $l_{0,2}$ er målt ved isotermisk innblåsning.
- Anbefalt maks undertemperatur er 10 K.
- For beregning av luftstrålens utbredels, lufthastigheter i oppholdssonen eller lydnivåer i rom med andre dimensjoner, henvises det til vårt beregningsprogram ProAir web som finnes tilgjengelig på vår hjemmeside på Internett.
- Diagrammet viser data for ROE innfelt i tak.
- Diagrammet skal ikke benyttes til innregulering.
- ∇ = Min mengde for å oppnå tilstrekkelig innreguleringstrykk.
- dB(C) verdien ligger normalt 6-9 dB høyere enn dB(A) verdien.

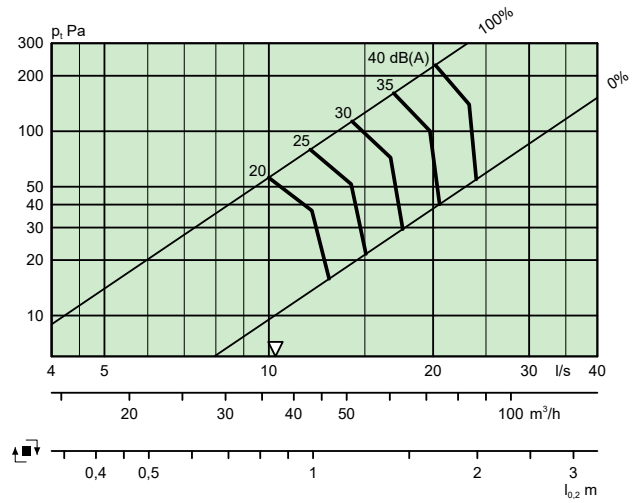
## ROC – Tilluft

### ROC 100-400, Tilluft

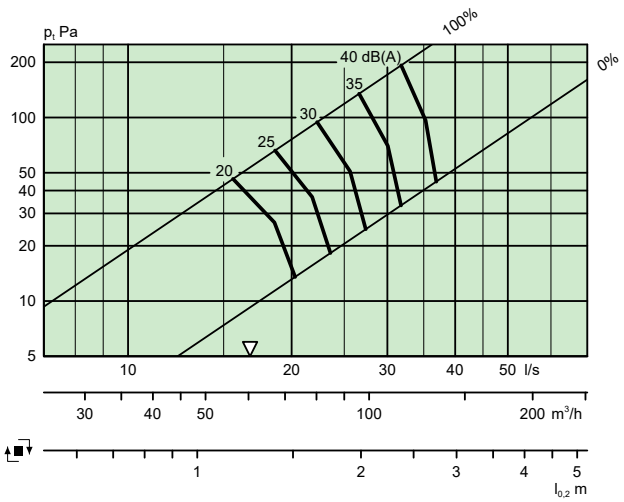



## ROC + ALS – Tilluft

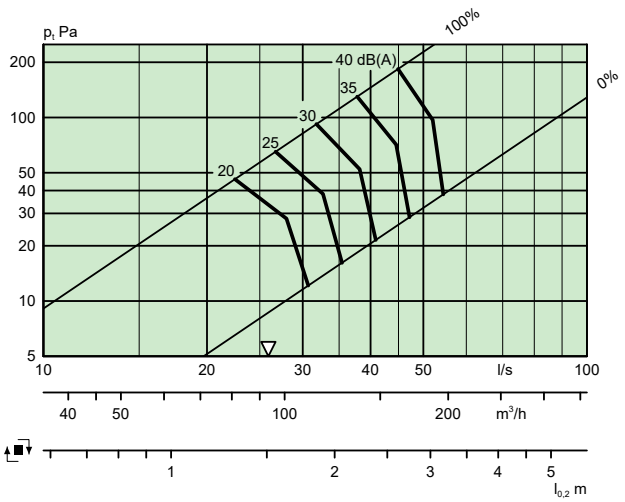
### ROC 100 + ALS 80-100, Tilluft



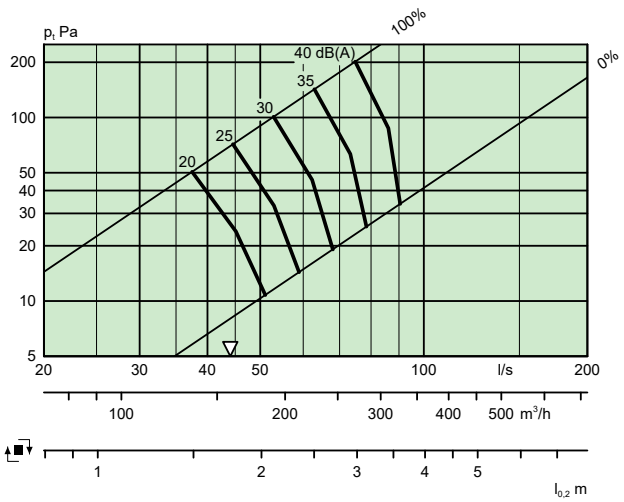

### ROC 125 + ALS 100-125, Tilluft



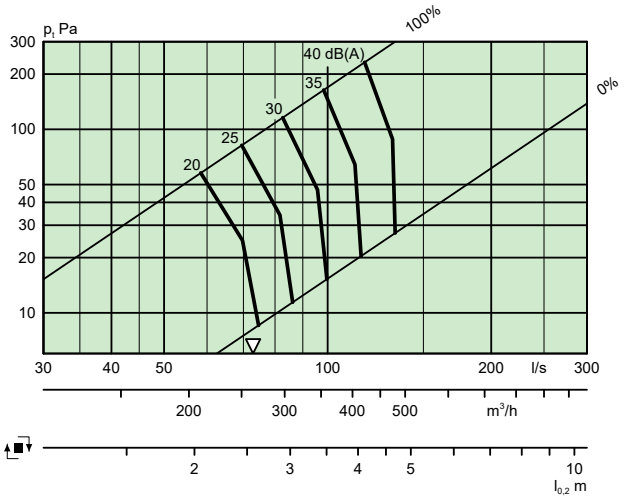
## ROC 160 + ALS 125-160, Tilluft



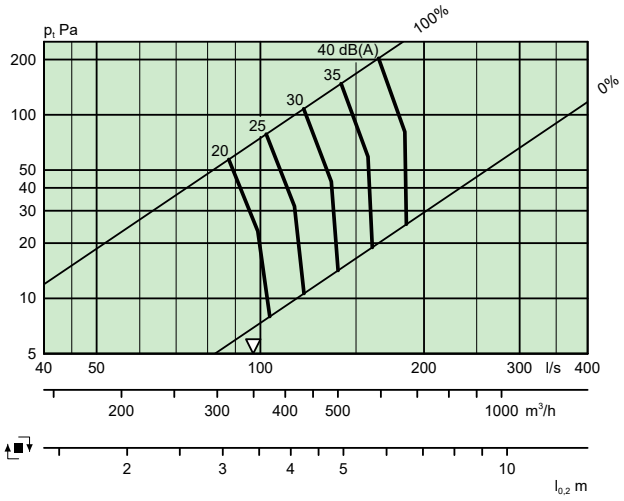

## ROC 200 + ALS 160-200, Tilluft



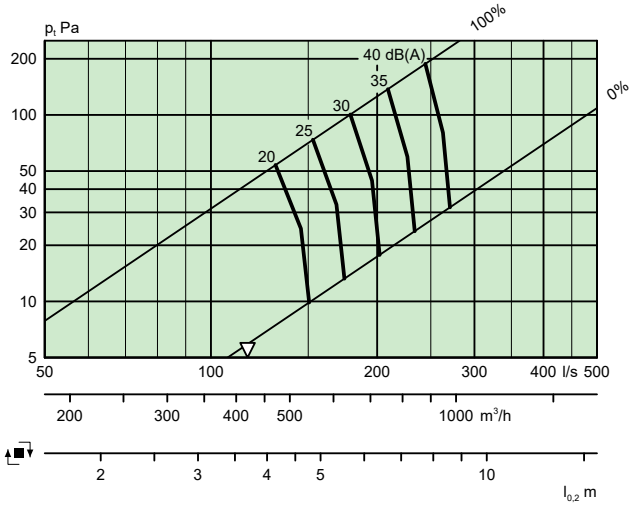

## ROC 250 + ALS 200-250, Tilluft




## ROC 315 + ALS 250-315, Tilluft

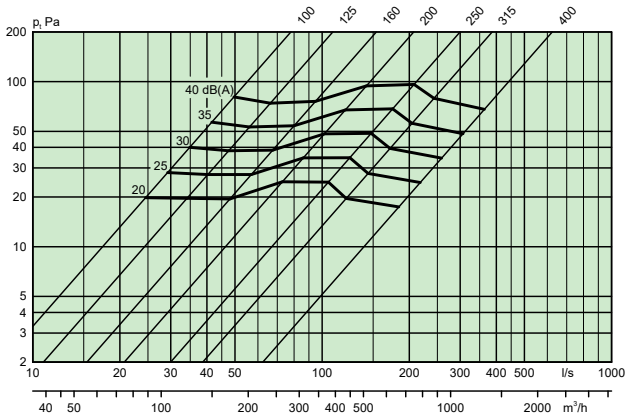



## ROC 400 + ALS 315-400, Tilluft

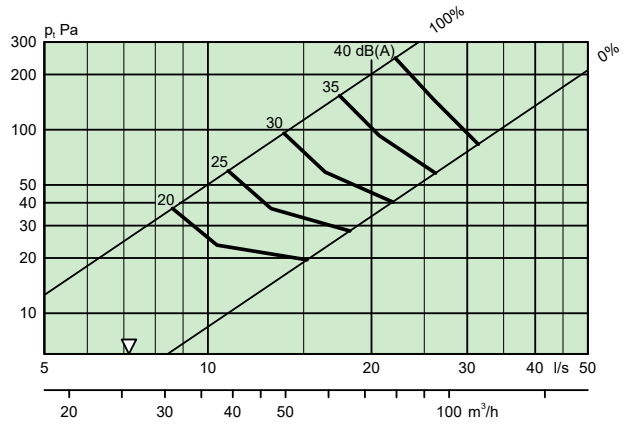


# ROC – Fraluft

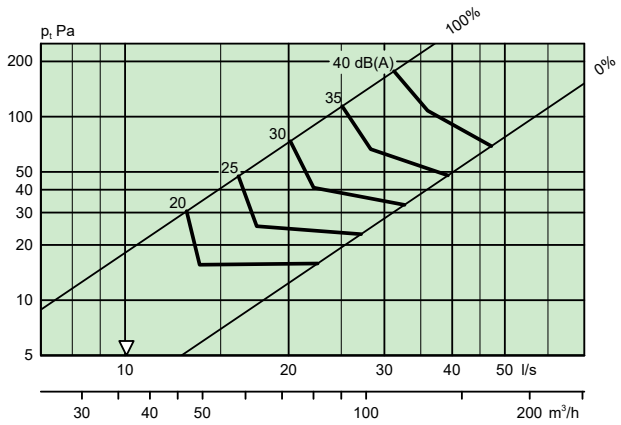
## ROC 100-400, Fraluft



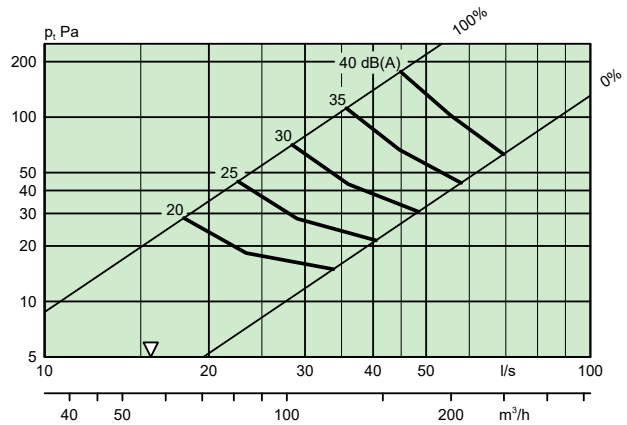

## ROC 100 + ALS 80-100, Fraluft



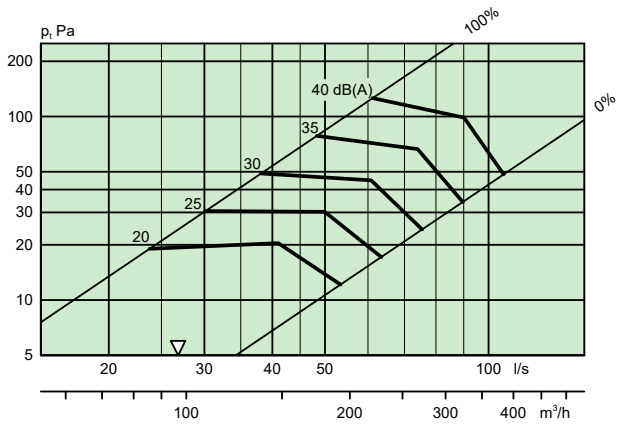

## ROC 125 + ALS 100-125, Fraluft



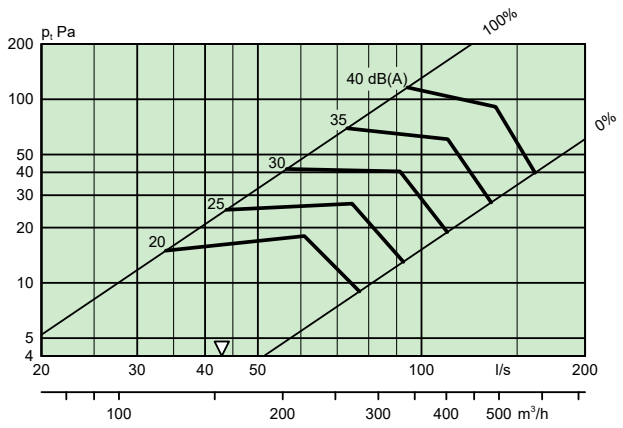

## ROC 160 + ALS 125-160, Fraluft



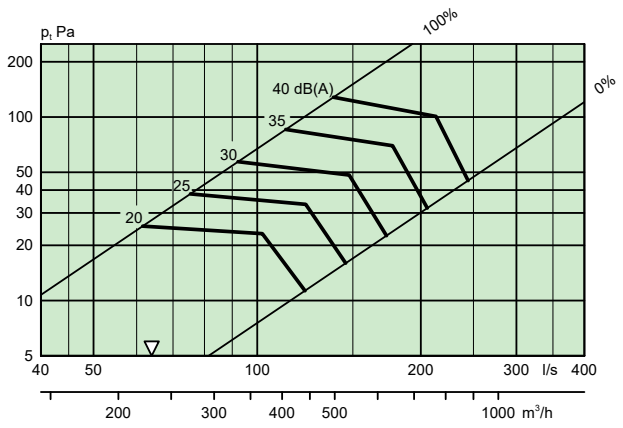

## ROC 200 + ALS 160-200, Fraluft



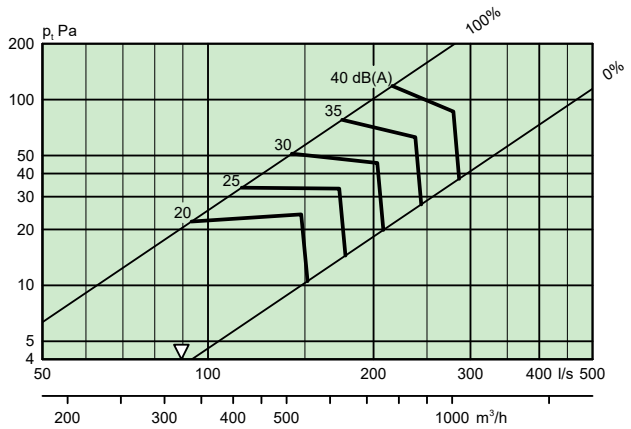
## ROC 250 + ALS 200-250, Fraluft




## ROC 315 + ALS 250-315, Fraluft



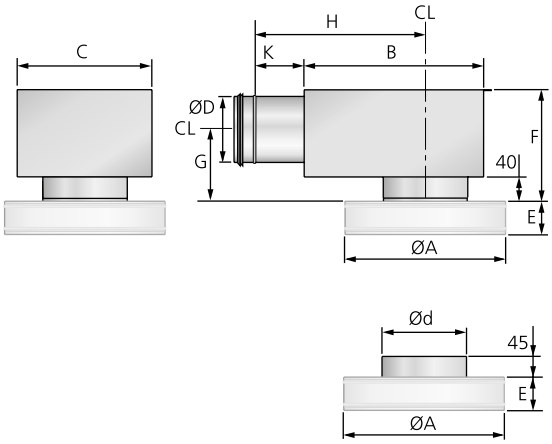

## ROC 400 + ALS 315-400, Fraluft



# Mål og vekt

| | | | | | | | | | | | ROC | ink. ALS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Størrelse | A | B | C | ØD | Ød | E | F | G | H | K | Vikt, kg | Vikt, kg |
| 100 | 228 | 227 | 192 | 79 | 99 | 60 | 160 | 90 | 200 | 50 | 1,2 | 3,1 |
| 125 | 304 | 282 | 217 | 99 | 124 | 60 | 180 | 100 | 270 | 80 | 1,8 | 4,3 |
| 160 | 380 | 342 | 252 | 124 | 159 | 60 | 204 | 112 | 315 | 80 | 2,6 | 6,1 |
| 200 | 456 | 404 | 288 | 159 | 199 | 88 | 241 | 130 | 375 | 100 | 3,9 | 7,4 |
| 250 | 568 | 504 | 332 | 199 | 249 | 117 | 281 | 150 | 465 | 115 | 6 | 11 |
| 315 | 568 | 622 | 388 | 249 | 314 | 117 | 342 | 175 | 575 | 140 | 5,9 | 13,4 |
| 400 | 568 | 767 | 488 | 314 | 399 | 117 | 402 | 210 | 712 | 175 | 5,6 | 16,9 |

CL = Midtlinje




*Figur 2. ROC + ALS.*

# Spesifikasjon

**Produkt**

| | | | |
|---|---|---|---|
| Sirkulær tak-/veggventil med ledeskinneperforering | ROC | a | -aaa |
| Versjon: | | | |
| Nom. anslutningsdimensjon, mm: 125, 160 | | | |

**Tilbehør**

| | | | | | |
|---|---|---|---|---|---|
| Anslutningskammer | | | ALS | d | -aaa -bbb |
| Versjon: | | | | | |
| For ROC | 100 | ALS | 80-100 | | |
| | 125 | ALS | 100-125 | | |
| | 160 | ALS | 125-160 | | |
| | 200 | ALS | 160-200 | | |
| | 250 | ALS | 200-250 | | |
| | 315 | ALS | 250-315 | | |
| | 400 | ALS | 315-400 | | |

# Beskrivelsetekst

Swegons forsterkede sirkulære ventil type ROC med anslutningskammer ALS og følgende funksjoner:

- Utførelse i 0,9 mm stålplate
- Ledeskinneperforering
- Demonterbart innreguleringsspjeld med låsbar posisjon
- Målefunksjon med lav metodefeil
- Innvendig lydabsorbent med forsterket overflatebelegg
- Pulverlakkert hvit, RAL 9003/NCS S 0500-N

| | | |
|---|---|---|
| Størrelse: | ROCa 160 | xx stk. |
| Tilbehør: | ALSd 125-160 | xx stk. |