



MBB

Mounting -and balancing instruction

Montage -og indregulerings vejledning

Montage och injusteringsinstruktion

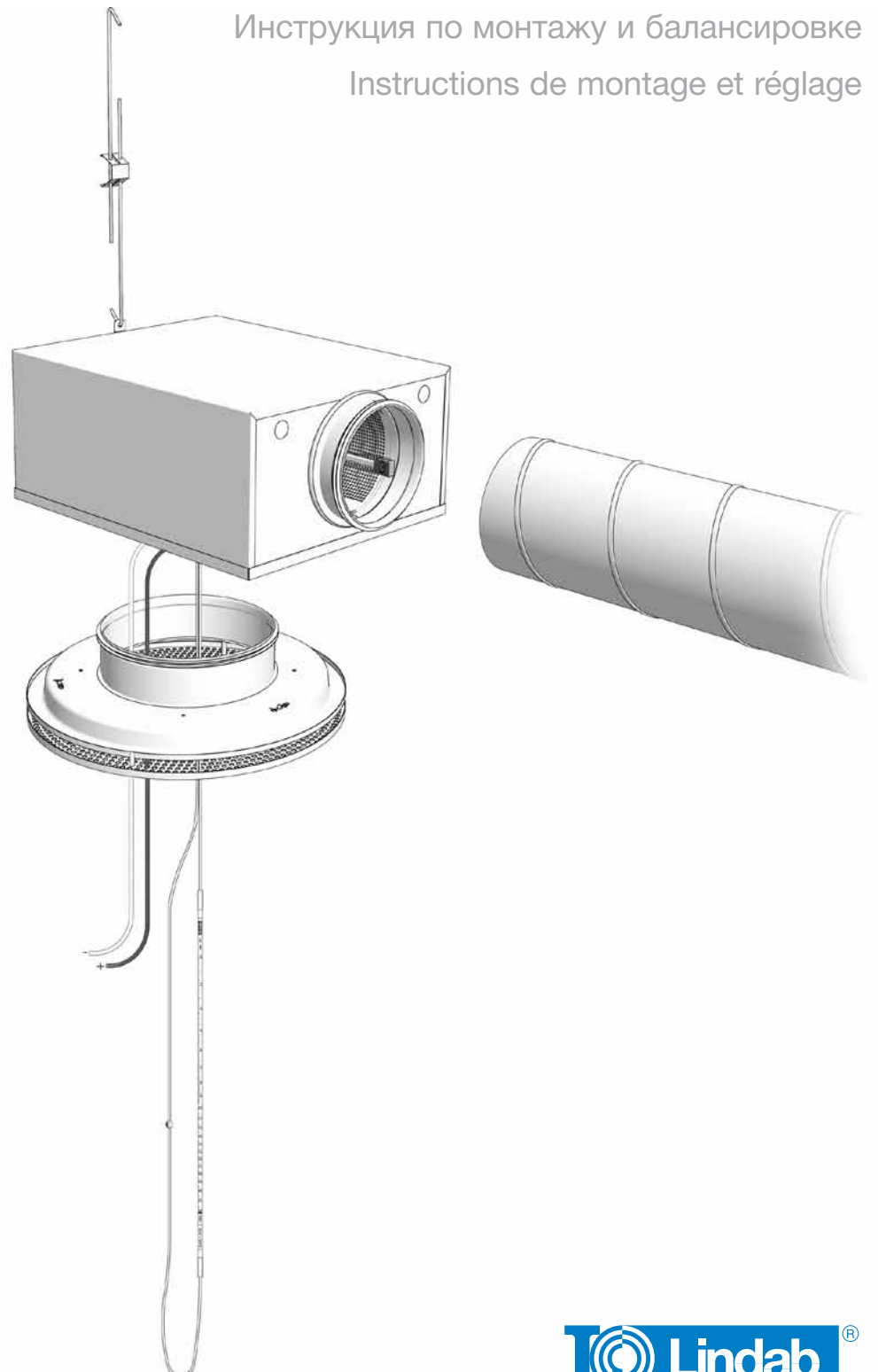
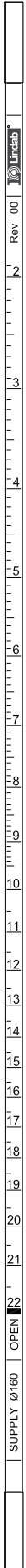
Asennus- ja säätöohjeet

Montage und Einregulierungsanweisung

Istruzioni di montaggio e bilanciamento

Инструкция по монтажу и балансировке

Instructions de montage et réglage





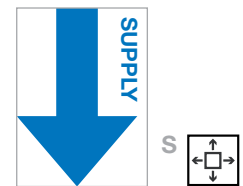
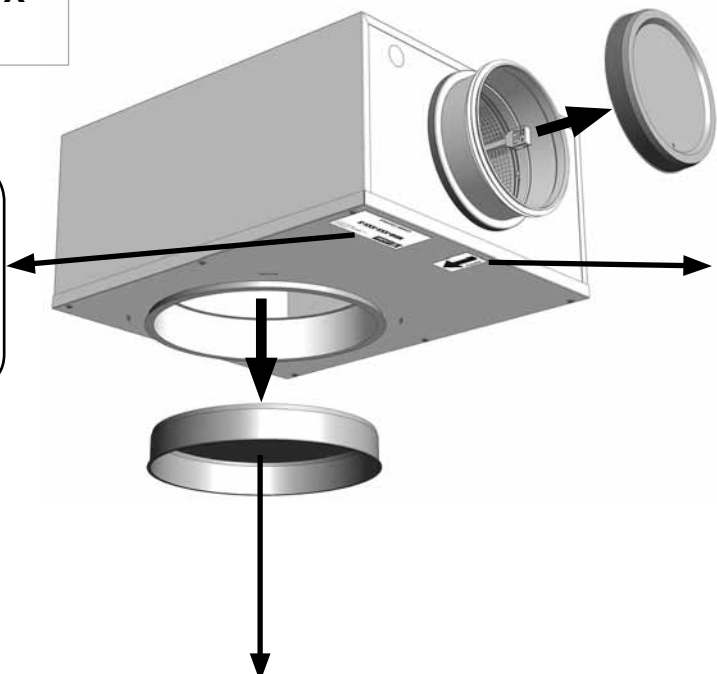
MBB

- Unpacking and protection of MBB**
- Udpakning og beskyttelse af MBB**
- Uppackning och skydd av MBB**
- Unpacking and protection of MBB - FIN**
- Unpacking and protection of MBB - DE**
- Unpacking and protection of MBB - ITA**
- Unpacking and protection of MBB - RUS**
- Déballage et protection de MBB**

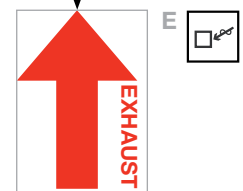
Keep MBB in original packing as long as possible to prevent damage
 Behold MBB i original emballagen så længe som muligt for at undgå skader
 Håll MBB i originalförpackning så länge som möjligt för att förhindra skador
 Keep MBB in original packing as long as possible to prevent damage - FIN
 Halten Sie MBB in Originalverpackung so lange wie möglich um Beschädigungen zu vermeiden - DE
 Keep MBB in original packing as long as possible to prevent damage -ITA
 Keep MBB in original packing as long as possible to prevent damage -RUS
 Conserver MBB en emballage d'origine aussi longtemps que possible pour prévenir tous dommages



Order code
 Ordre kode
 Beställningskod
 Tuotekoodi
 Bestellcode
 Codice d'ordine
 Код Заказа
 Codification



Functional use
 Anvendelse
 Användningsområde
 Käyttökohteet
 Funktion
 Functional use - ITA
 Functional use - RUS
 Utilisation

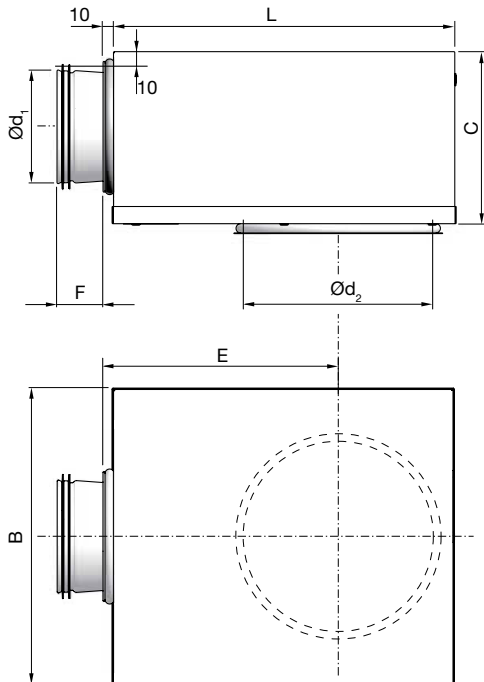
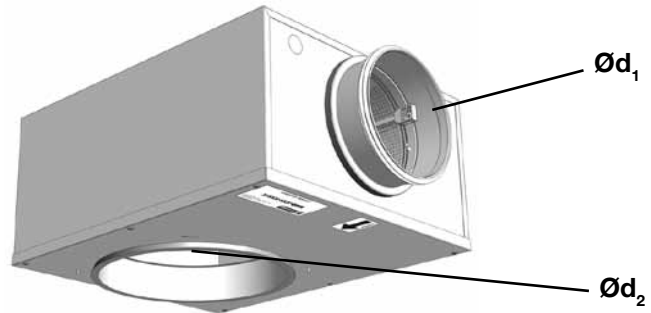


Remove the protective caps only just before installation to avoid damage to internal parts
 Fjern først beskyttelses propperne lige før installation, for at undgå skader på de indre dele
 Ta först bort skyddspluggar precis innan installationen, för att undvika skador på inre delar
 Remove protective caps just before installation to avoid damage to internal parts - FIN
 Entfernen Sie die Schutzkappen erst unmittelbar vor der Installation, auf Schäden an inneren Teile zu vermeiden
 Remove the protective caps only just before installation to avoid damage to internal parts -ITA
 Remove the protective caps only just before installation to avoid damage to internal parts -RUS
 Retirer les bouchons de protection à l'installation seulement pour prévenir tous dommages aux parties internes



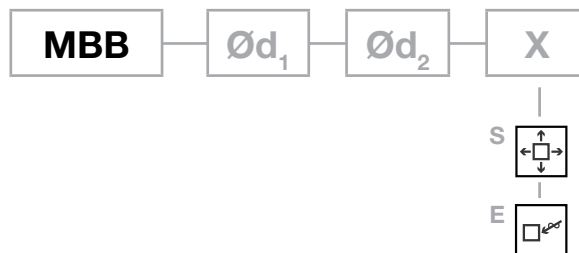
MBB

Dimensions
Dimensioner
Dimensioner
Mitat
Dimensionen
Dimensioni
Размеры
Dimensions



Ød ₁ mm	Ød ₂ mm	B mm	C mm	E mm	F mm	L mm	m kg
100	100	260	159	216	50	310	2,6
100	125	260	159	216	50	310	2,6
100	160	260	159	216	50	310	2,6
125	125	310	184	262	50	376	3,7
125	160	310	184	262	50	376	3,7
125	200	310	184	262	50	376	3,7
160	160	380	220	323	50	459	5,5
160	200	380	220	323	50	459	5,5
160	250	380	220	323	50	459	5,5
200	200	460	259	396	70	565	7,3
200	250	460	259	396	70	565	7,3
200	315	460	259	396	70	565	7,3
250	250	540	309	486	70	698	10,6
250	315	540	309	486	70	698	10,6
250	400	540	309	486	70	698	10,6
315	315	540	373	646	70	858	13,5
315	400	540	373	646	70	858	13,5

Order code
Ordre kode
Beställningskod
Tuotekoodi
Bestellcode
Codice d'ordine
Код Заказа
Codification



Symbols
Symboler
Symboler
Symbolit
Symbole
Simboli
Обозначения
Symboles



Open / closed damper
Åbent / lukket spjæld
Öppet / Stängt spjäll
Säätöpelti auki / kiinni
Geöffnete / Geschlossene Drossel
Serranda aperta / chiusa
Заслонка регулятора
открыта / закрыта
Registre ouvert / ferme



Supply air
Indblæsning
Tilluft
Sisäänpuhallus
Zuluft
Aria di mandata
Приточная вентиляция
Soufflage



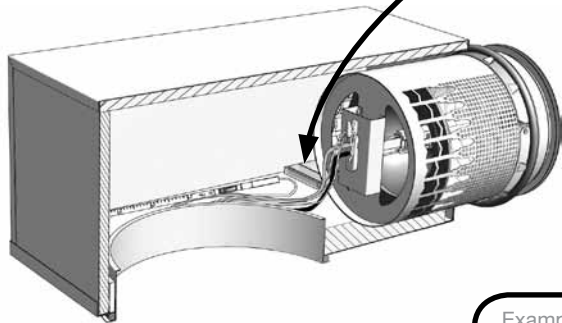
Exhaust air
Udsugning
Frånluft
Poistoilma
Abluft
Aria di estrazione
Вытяжная вентиляция
Extraction



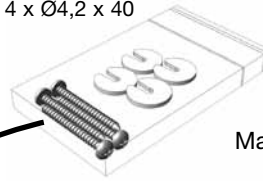
MBB

Accessories-MBB Tilbehør-MBB Tillbehör-MBB Lisävarusteet-MBB Zubehör-MBB Accessori-MBB Аксессуары-MBB Accessoires-MBB

Mounting of diffuser in MBB
Montering af armatur i MBB
Mounting of diffuser in MBB - SWE
Mounting of diffuser in MBB -FIN
Durchlassmontage im MBB
Montaggio del diffusore in MBB
Mounting of diffuser in MBB -RUS
Montage du diffuseur dans MBB



4 x Ø4,2 x 40



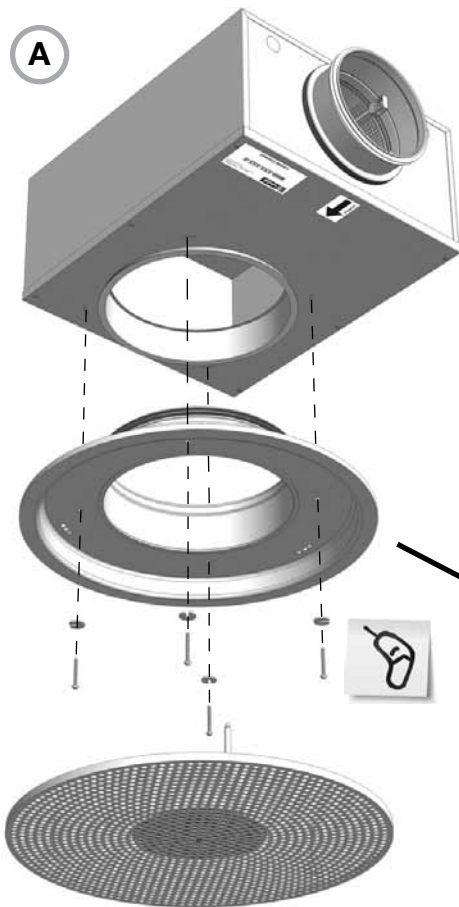
Included accessories
 Inkluderet tilbehør
 Medföljande tillbehör
 Varusteet laitteen mukana
 Enthaltene Zubehör
 Materiali inclusi in forniture standard
 Аксессуары в комплекте
 Accessoires inclus



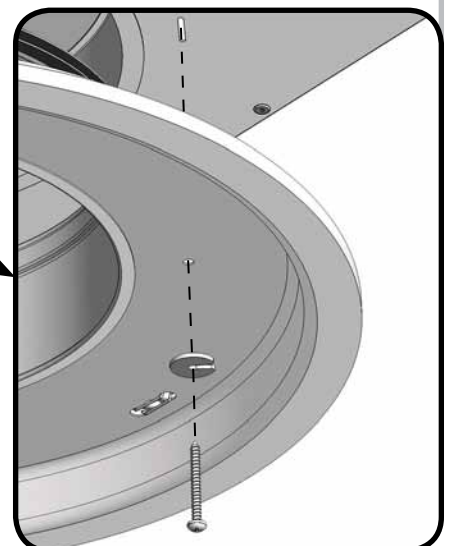
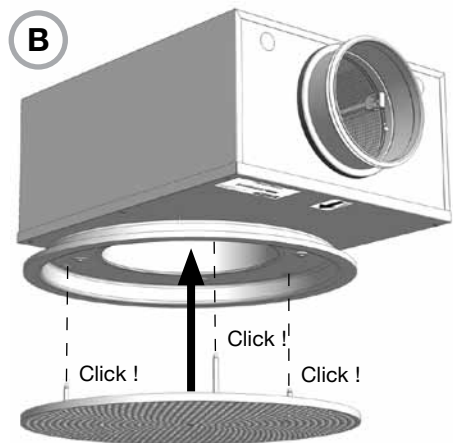
Screws only for mounting of diffuser + MBB
 Skruer kun til montering af armatur + MBB
 Skruvar bara för montage av don + MBB
 Schrauben nur zu Montage des Durchlasses + MBB
 Viti solo per il montaggio del diffusore + MBB - ITA
 Screws only for mounting of diffuser + MBB - RUS
 Vis seulement pour le montage du diffuseur + MBB

Example:
 Eksempel:
 Exempel:
 Esimerkki:
 Beispiel:
 Esempio:
 Пример:
 Exemple:
 MBB
 160-250-S
 +
 PCA-250

A



B





MBB

Accessories-MBB Tilbehør-MBB Tillbehör-MBB Lisävarusteet-MBB Zubehör-MBB Accessori-MBB Аксессуары-MBB Accessoires-MBB

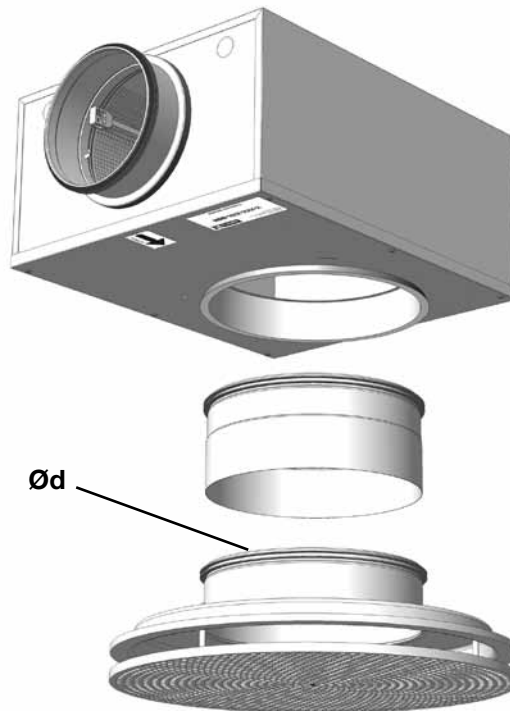
- MBZ - Optional accessories**
- MBZ - Ekstra tilbehør**
- MBZ - Tillbehör som tillval**
- MBZ - Lisävarusteet tilauksesta**
- MBZ - Zubehör**
- MBZ - Accessori su richiesta**
- MBZ - Дополнительные аксессуары**
- MBZ - Accessoires optionnels**

MBZ

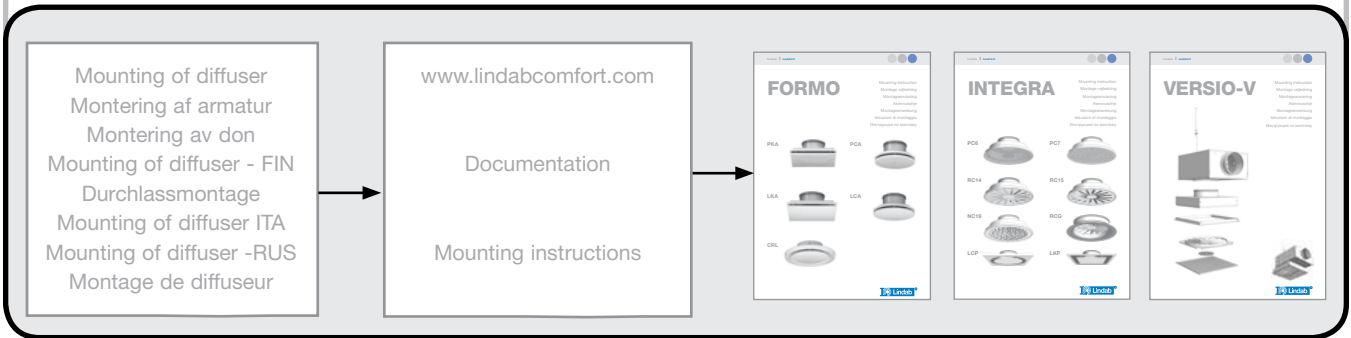


- Extension piece
- Forlængerstykke
- Förlängningsstos
- Jatkokappale
- Verlängerungsstutzen
- Manicotto maschio femmina di prolungamento
- Удлинитель
- Rallonge

- Order code**
- Ordre kode**
- Beställningskod**
- Tuotekoodi**
- Bestellcode**
- Codice d'ordine**
- Код Заказа**
- Codification**



- Mounting MBB - page 7-9
- Ophængning af MBB - side 7-9
- Upphängning av MBB - sida 7-9
- Kannakointi MBB - page 7-9 FIN
- Montage des MBB - Seite 7-9
- Montaggio di MBB - page 7-9
- Монтаж MBB - page 7-9
- Montage du MBB - page 7-9

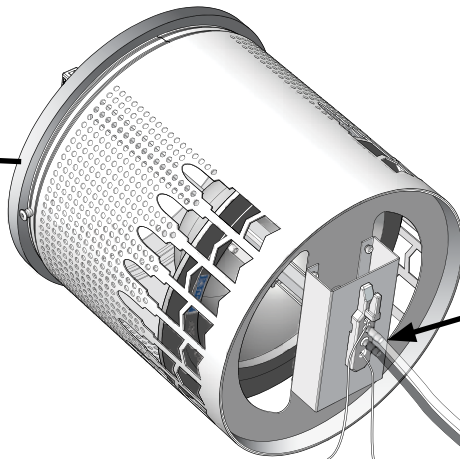




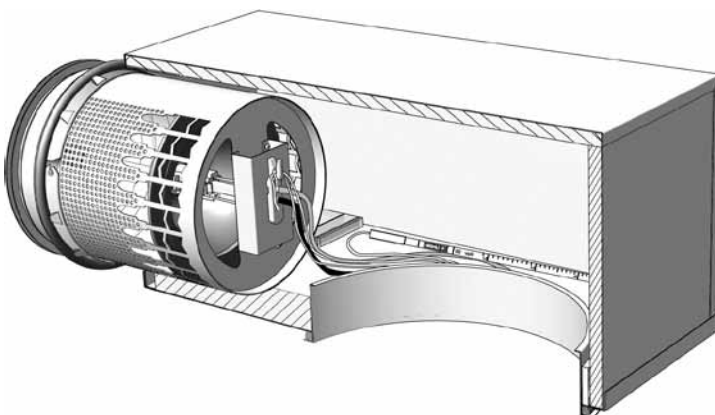
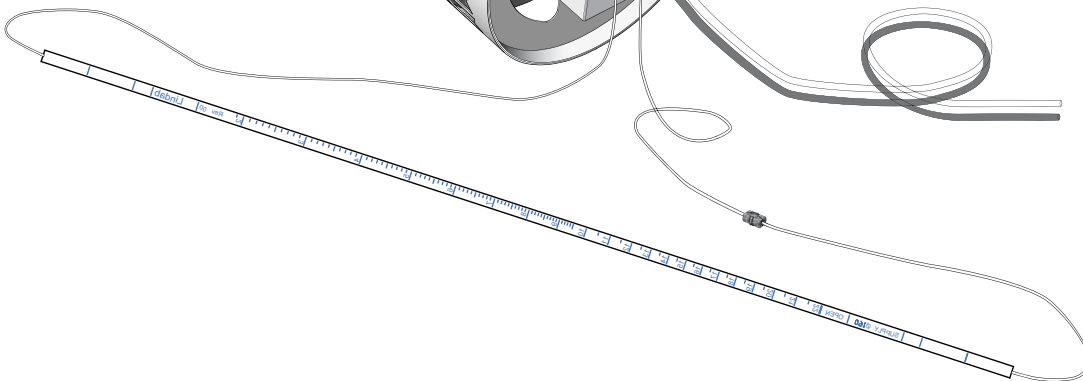
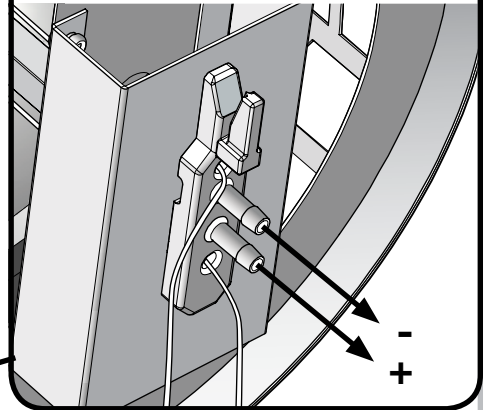
MBB

Internal parts of MBB
 Indvendige dele af MBB
 Inre delar av MBB
 Internal parts of MBB -FIN
 Innenteile von MBB
 Parti interne di MBB
 Internal parts of MBB - RUS
 Composants internes de MBB

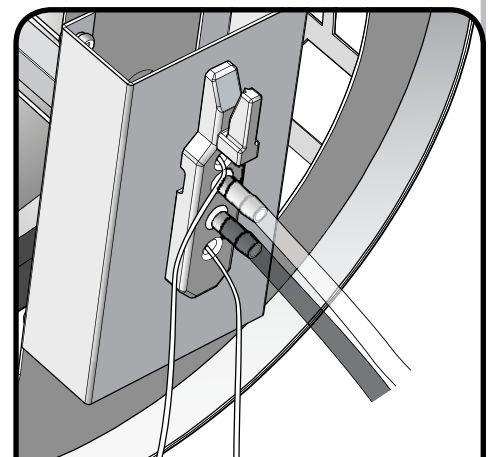
Damper
 Spjæld
 Spjäll
 Säätöpelti
 Drossel
 Serranda
 клапан
 Registre



Measuring outlets
 Måleudtag
 Mätuttag
 Mittausyhteet
 Meßstutzen (zum Anschluß eines Meßgerätes)
 Punti per misura pressione
 Измерительные патрубки
 Prises de pression



Store strings and tubes inside MBB when not in use
 Opbevar snore og slanger inde i MBB når de ikke anvendes
 Placera snören och slangar uppe i lådan då dessa inte används
 Nosta naru ja mittayhteet laitteen sisälle
 Schnüre/Schläuche in MBB lagern, wenn sie nicht benutzt werden
 Posizionare cavi di taratura e tubi per misurazione all'interno del Plenum MBB
 Уложите шнур и трубки в MBB
 Ranger les cordes et tubes à l'intérieur du MBB après usage

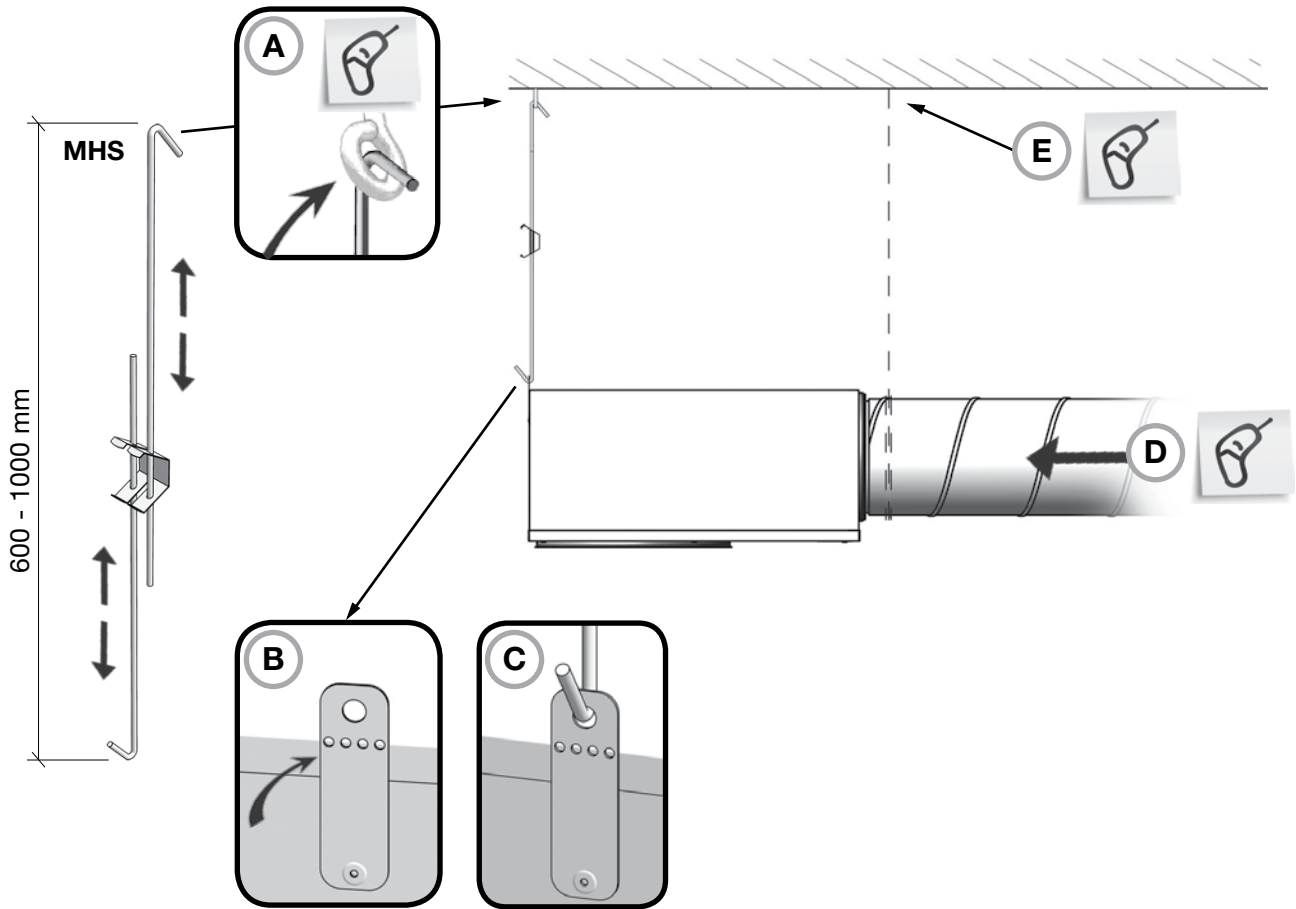
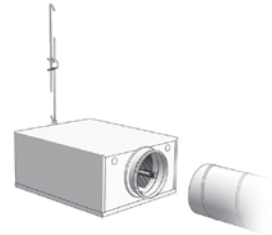


Plastic tubes included
 Plasticslanger inkluderet
 Mätslangar ingår
 Mittaletkut vakiovarusteena
 Kunststoffschläuche (enthalten)
 Tubi in plastica inclusi
 Пластиковые трубки в комплекте
 Tubes plastique inclus



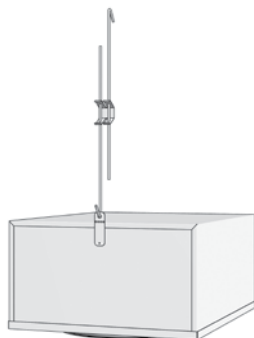
MBB

- Mounting of MBB - MHS
- Ophængning af MBB - MHS
- Upphängning av MBB - MHS
- Kannakointi MBB - MHS
- Montage des MBB - mit Zubehör MHS
- Montaggio di MBB - sospensioni MHS
- Монтаж MBB - MHS
- Montage de MBB - MHS



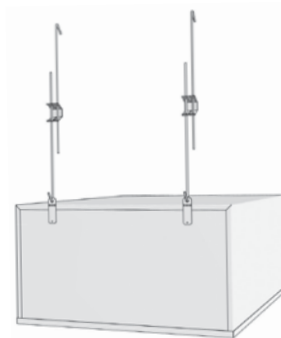
NB !

$\text{Ød}_1 = 100-200 = 1 \times \text{MHS}$



NB !

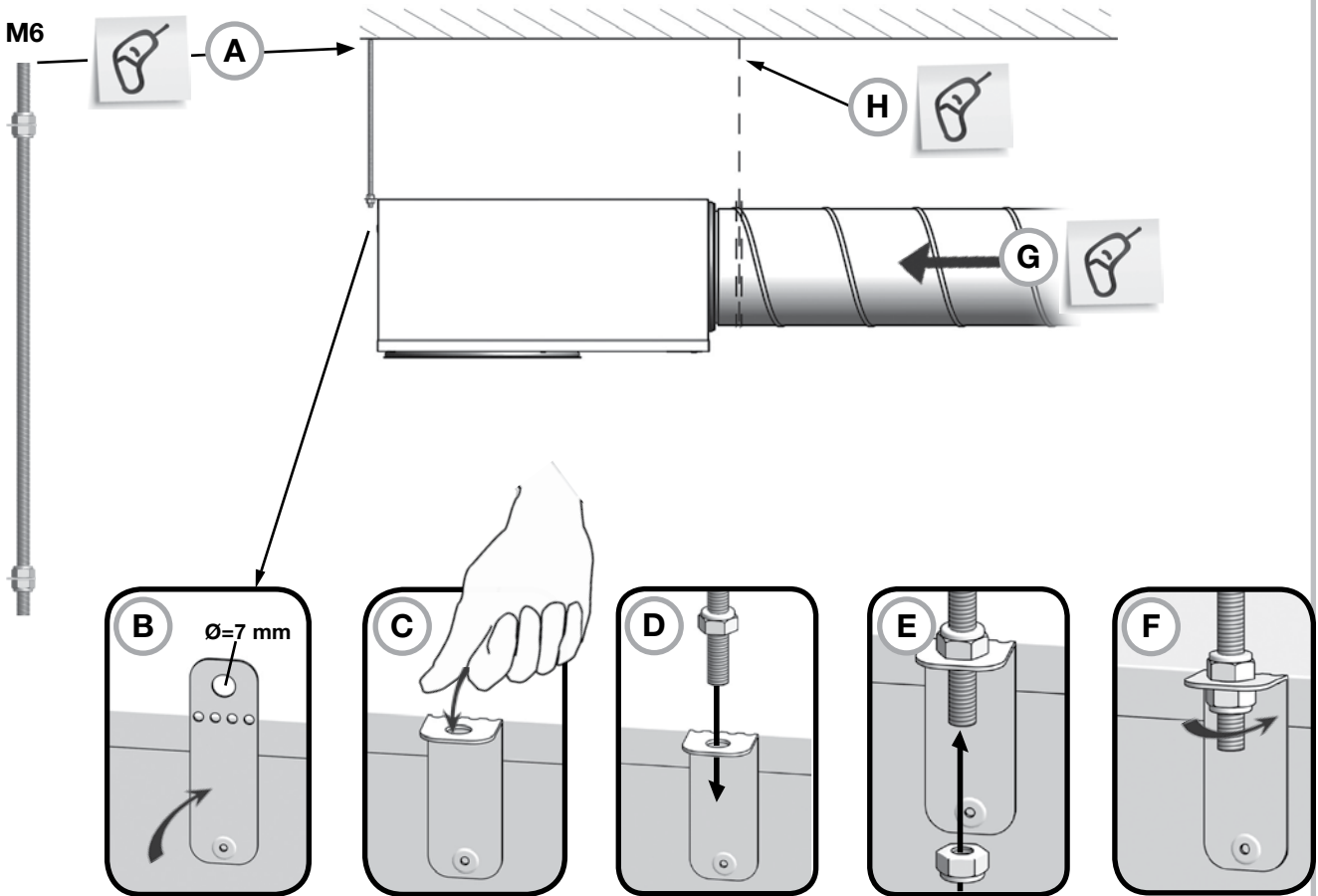
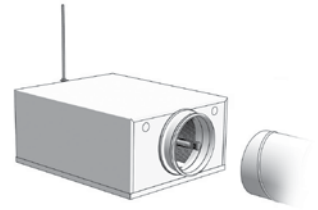
$\text{Ød}_1 = 250-315 = 2 \times \text{MHS}$



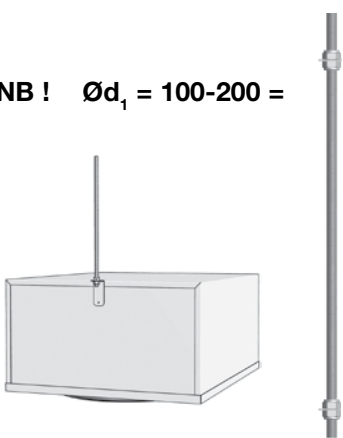


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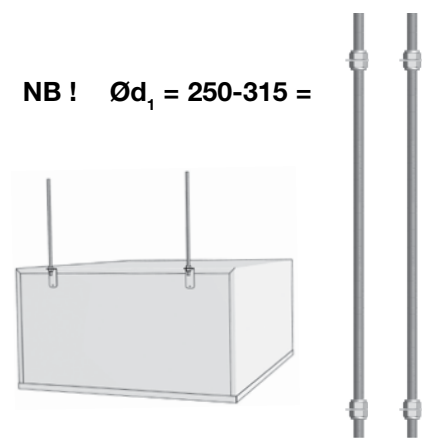
- Mounting of MBB - Threaded bar
- Ophængning af MBB - Gevindstang
- Upphängning av MBB - Gängstång
- Kannakointi MBB - Kierretanko
- Montage des MBB - Gewindestange
- Montaggio di MBB - Barre filettate
- Монтаж MBA - Крепежная шпилька
- Montage de MBB - Tiges filetées



NB ! $\text{Ød}_1 = 100-200 =$



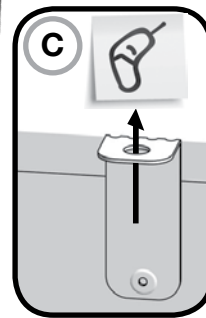
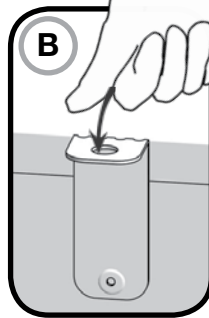
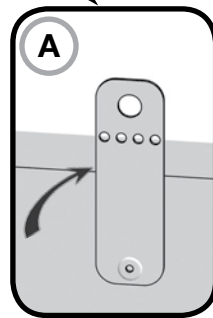
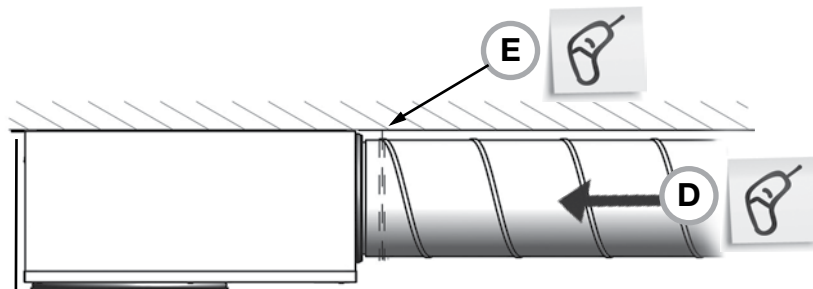
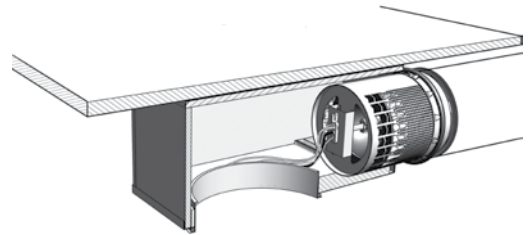
NB ! $\text{Ød}_1 = 250-315 =$





MBB

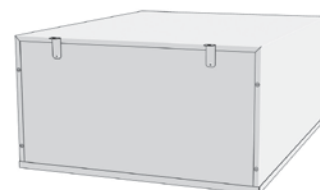
- Mounting of MBB - Directly against ceiling
- Ophængning af MBB - Direkte mod loft
- Upphängning av MBB - Dikt mot tak
- Kannakointi MBB - Suoraan kattopintaan
- Montage des MBB - Direkt an die Decke
- Montaggio di MBB - Direttamente a soffitto
- Монтаж MBB - к потолку
- Montage de MBB - Directement contre le plafond



NB ! $\varnothing_{d_1} = 100-200 = 1 \text{ x}$



NB ! $\varnothing_{d_1} = 250-315 = 2 \text{ x}$

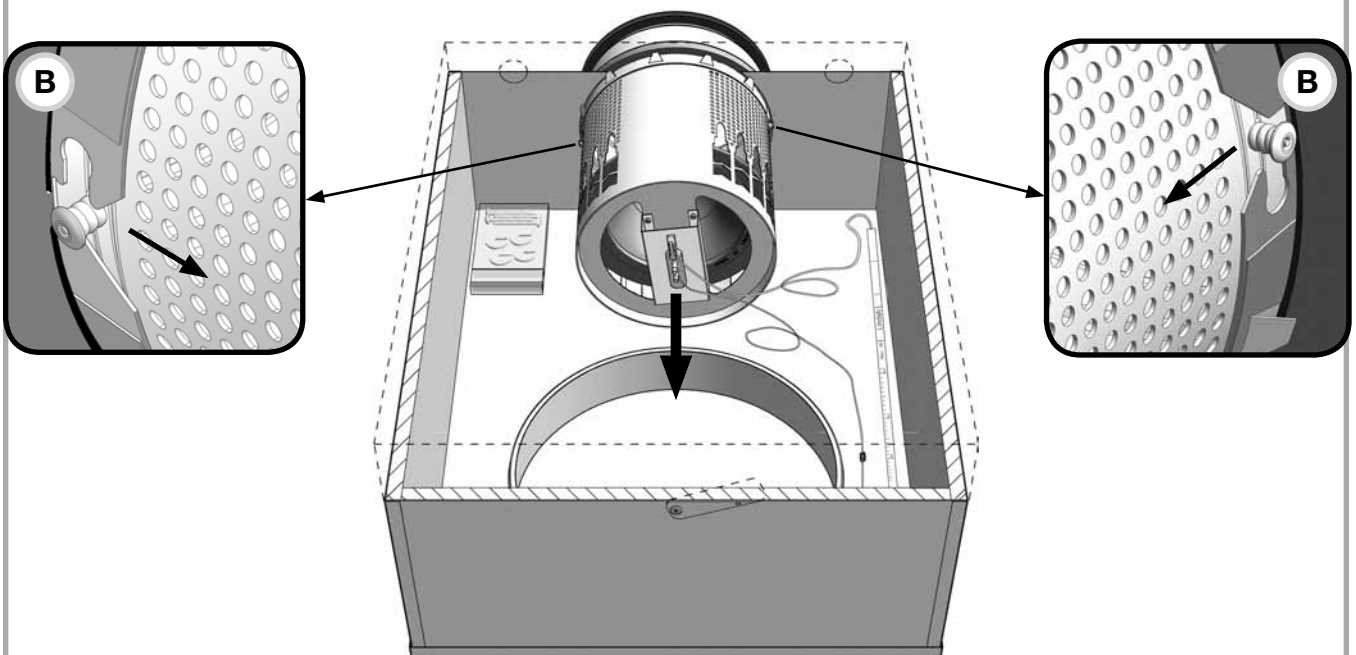
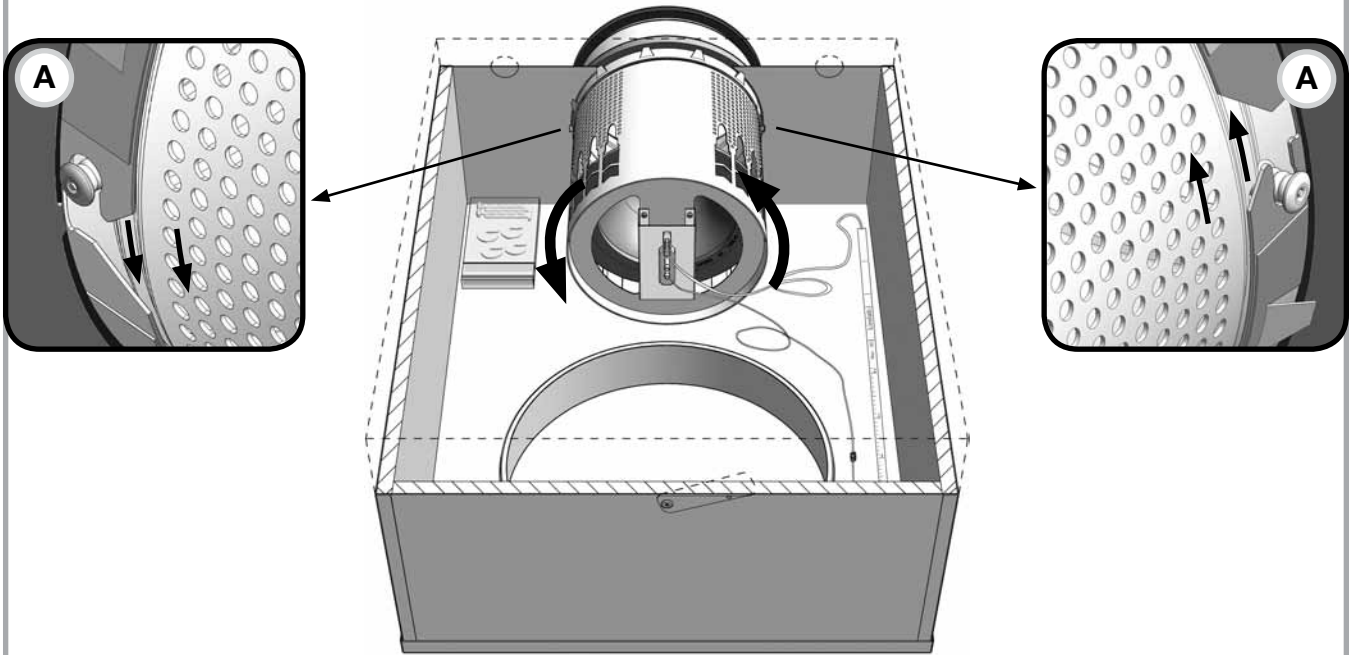




MBB

Maintenance
 Vedligeholdelse
 Underhåll
 Huolto
 Wartung
 Manutenzione
 Обслуживание
 Entretien

- Demounting damper
- Demonter spjæld
- Demontera spjäll
- Säätöpellin irroitus
- Drossel demontieren
- Smontaggio serranda
- Демонтаж клапана
- Démontage du registre

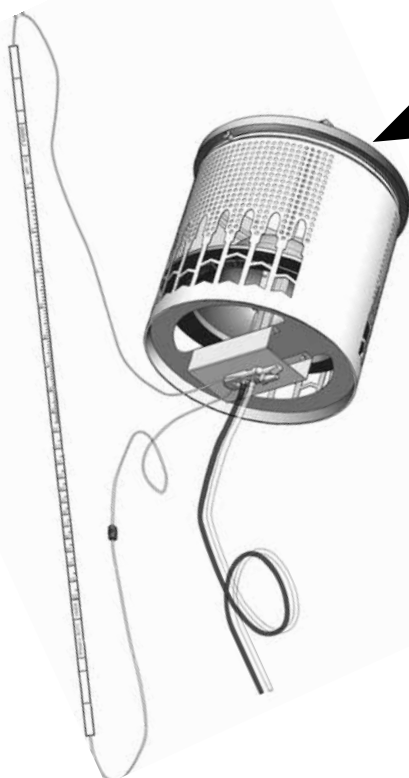
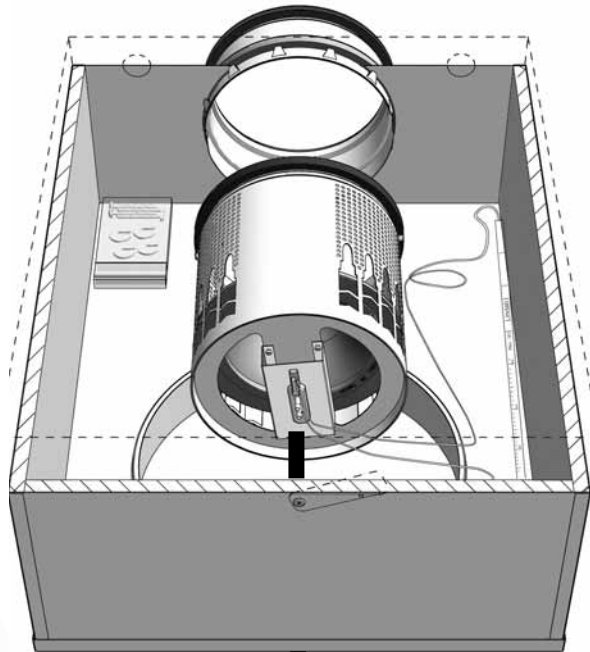
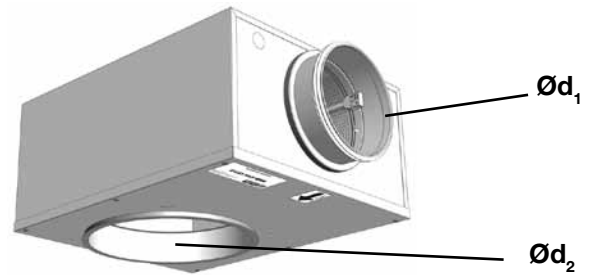




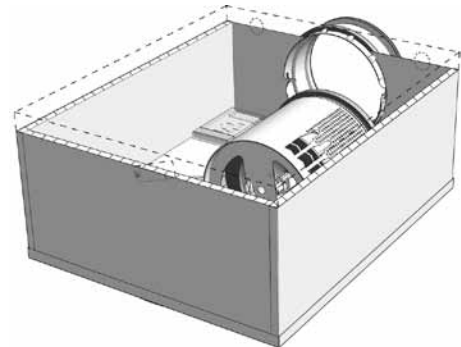
MBB

Maintenance
 Vedligeholdelse
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 Обслуживание
 Entretien

- Demounting damper
- Demonter spjæld
- Demontera spjäll
- Säätöpellin irroitus
- Drossel demontieren
- Smontaggio serranda
- Демонтаж клапана
- Démontage du registre



C



! $\text{Ød}_1 = \text{Ød}_2$ **!**

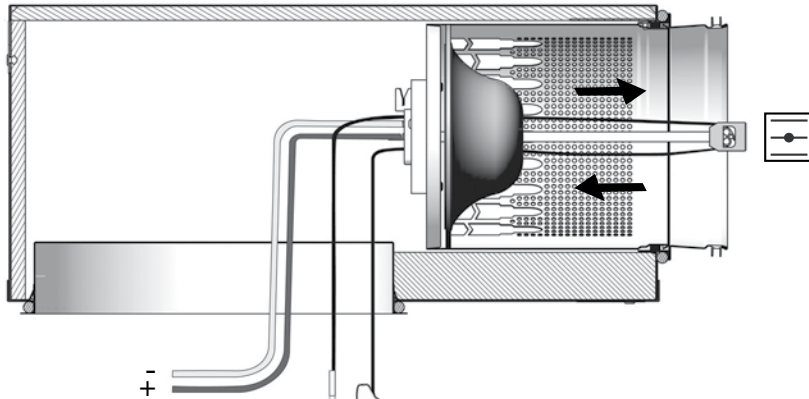


Damper can not be taken out of MBB
 Spjæld kan ikke tages ud af MBB
 Spjäll kan inte tas ur MBB
 Damper can not be taken out of MBB -FIN
 Drossel nicht aus der MBB genommen werden -DE
 Damper can not be taken out of MBB -ITA
 Damper can not be taken out of MBB -RUS
 Le registre ne peut pas être retiré de MBB

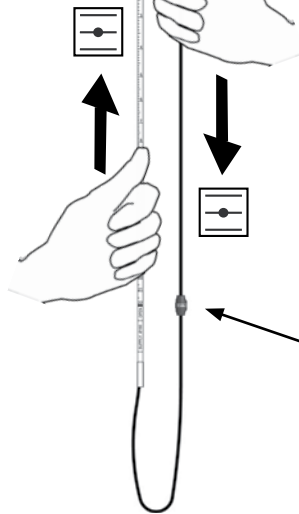


MBB

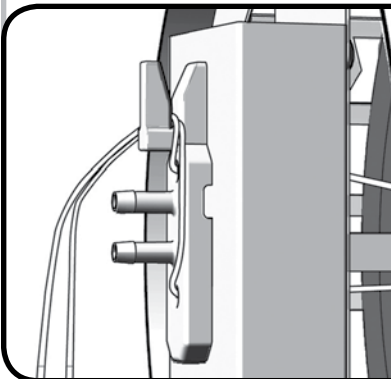
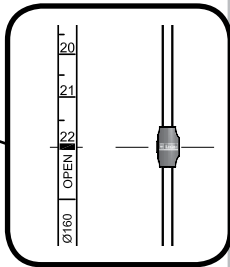
Open damper
 Åben spjæld
 Öppna spjället
 Säätopelti auki
 Drossel öffnen
 Apertura serranda
 Открыть клапан
 Ouvrir registre



! Use both hands !
 Brug begge hænder !
 Använd båda händerna !
 Use both hands ! -FIN
 Benutzen Sie beide Hände !
 Utilizzare entrambe le mani !
 Use both hands ! - RUS
 Utiliser les deux mains



90° Keep k-factor scale vertical !
 Hold k-factor scale lodret !
 Håll k-faktorskalan lodrätt
 Pidä asteikko pystysuorassa
 k-Wert Skala in vertikaler Position halten!
 scala di taratura fattore k in posizione verticale!
 Держите шкалу К-фактор вертикально!
 Garder la réglette coefficient k verticale

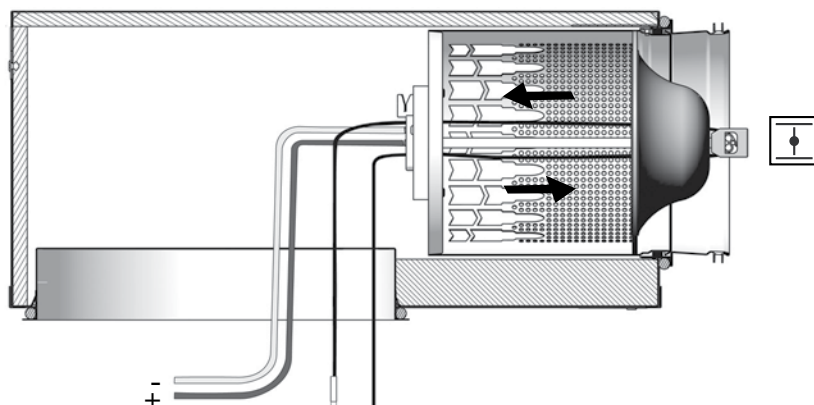


Lock strings when damper is in correct position
 Lås snore når spjældet er indstillet i korrekt position
 Lås snörena när spjället är ställt i rätt position
 Lukitse asento säädön jälkeen
 Schnüre fixieren, wenn Drossel einreguliert ist.
 Bloccare i cavi di taratura quando la serranda conica raggiunge la posizione desiderata
 Зафиксируйте шнур после настройки клапана
 Verrouiller les cordes lorsque le registre est en position définitive

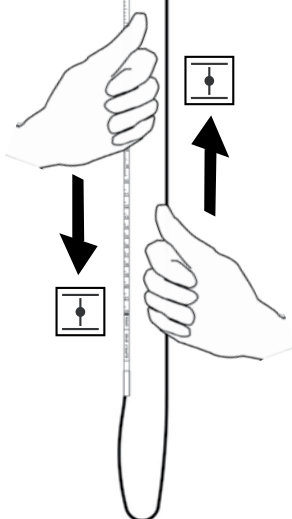


MBB

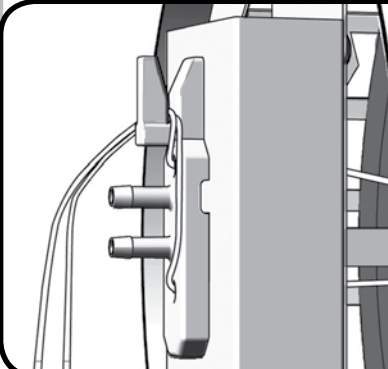
Close damper
 Luk spjæld
 Strypa på spjället
 Säätopelti kiinni
 Drossel schliessen
 Chiusura serranda
 Закрыть клапан
 Fermer registre



! Use both hands !
 Brug begge hænder !
 Använd båda händerna !
 Use both hands ! -FIN
 Benutzen Sie beide Hände !
 Utilizzare entrambe le mani !
 Use both hands ! - RUS
 Utiliser les deux mains



90° Keep k-factor scale vertical !
 Hold k-factor scale lodret !
 Håll k-faktorskalan lodrätt
 Pidä asteikko pystysuorassa
 k-Wert Skala in vertikaler Position halten!
 scala di taratura fattore k in posizione verticale!
 Держите шкалу K-фактор вертикально!
 Garder la réglette coefficient k verticale

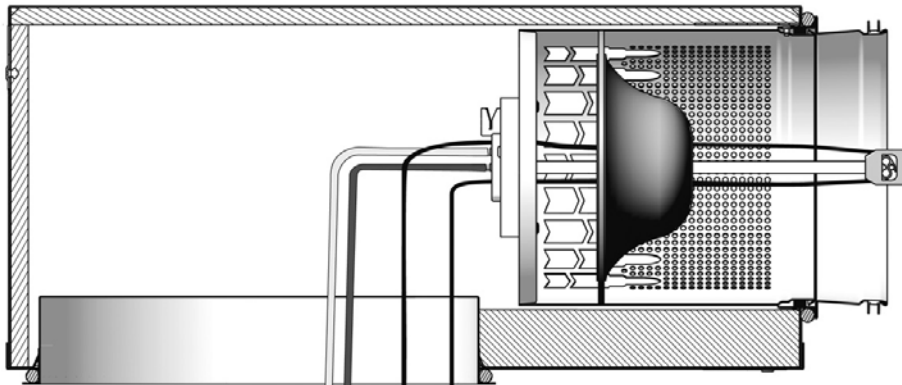


Lock strings when damper is in correct position
 Lås snöre når spjældet er indstillet i korrekt position
 Lås snörena när spället är ställt i rätt position
 Lukitse asento säädön jälkeen
 Schnüre fixieren, wenn Drossel einreguliert ist.
 Bloccare i cavi di taratura quando la serranda conica raggiunge la posizione desiderata
 Зафиксируйте шнур после настройки клапана
 Verrouiller les cordes lorsque le registre est en position définitive



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Using the k-factor scale
 Anvendelse af k-faktor skalaen
 Att använda k-faktorskalan
 k-arvoasteikon käyttö
 Verwenden der k-Wert Skala
 Impiego della scala graduata del fattore k
 Использование шкалы k-фактор
 Utiliser la règlette coefficient k



1 Measure Δp_i - Mål Δp_i - Mät Δp_i
 Mittaa Δp_i - Δp_i messen - Misura Δp_i
 Измерение Δp_i - Mesurer Δp_i

2

k = 15,5

Reading the k-factor scale
 Aflæsning af k-faktor skalaen
 Avläs k-faktorn
 Lue k-arvo asteikolta
 k-Wert ablesen.
 Lettura della scala graduate del fattore k
 Определение значения K-фактор
 Lire la règlette coefficient k

90° Keep k-factor scale vertical for accurate readings
 Hold k-factor skala lodret for nøjagtige aflæsninger
 Håll k-faktorskalan lodrätt för korrekt avläsning
 Pidä asteikko pystysuorassa
 Für das genaue Ablesen, die k-Wert Skala in vertikaler Position halten.
 Per operare letture accurate adoperare la scala del fattore K in posizione verticale
 Держите шкалу K-фактор вертикально для точности определения
 Garder la règlette coefficient k verticale pour une lecture précise

$q_v = k \times \sqrt{\Delta p_i}$

$\Delta p_i = (q_v / k)^2$

q_v [l/s]: Air flow rate
 Volumenstrøm
 Luftflöde
 Ilmavirta
 Volumenstrom
 Portata d'aria
 Расход воздуха
 Débit

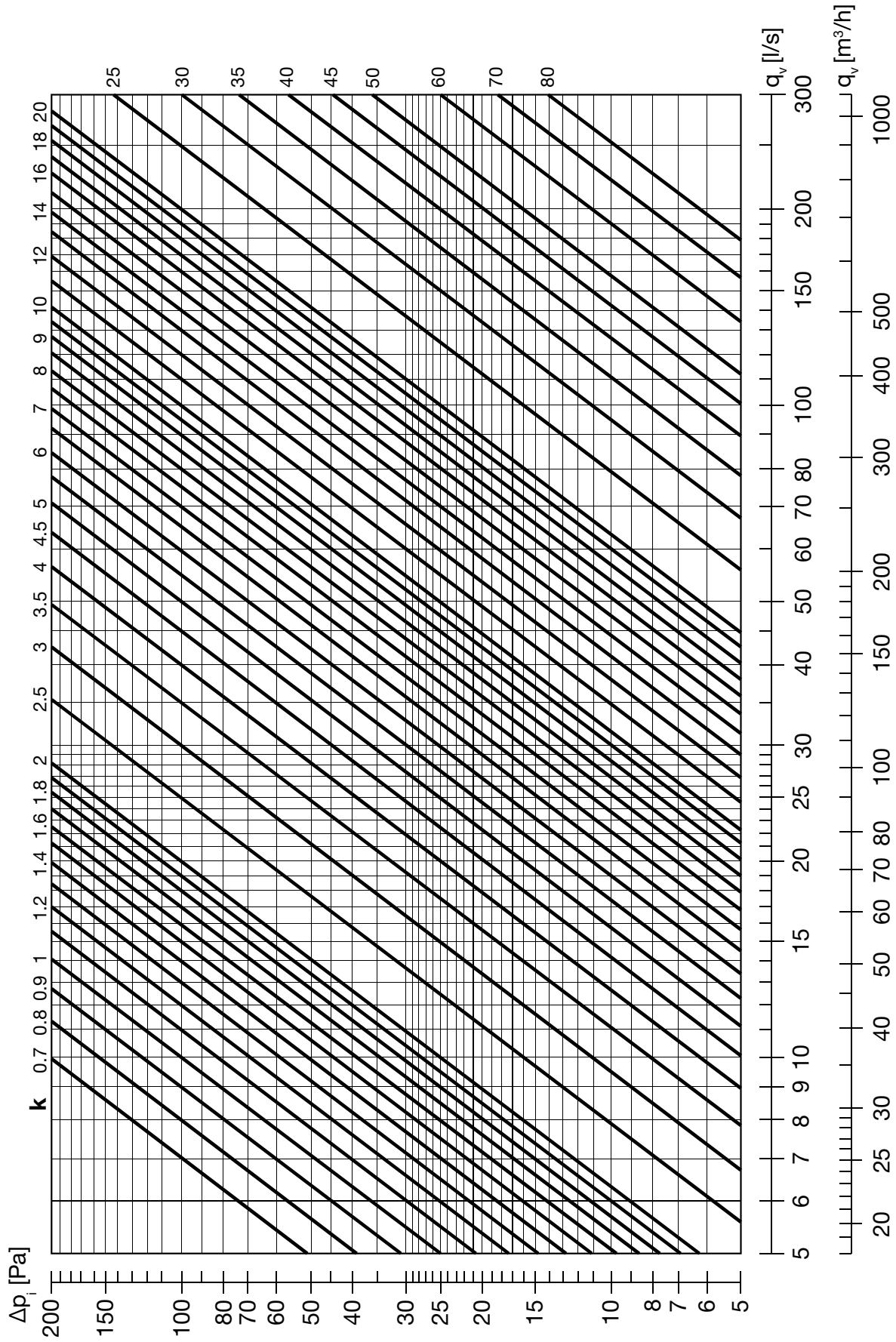
q_v [m³/h] = q_v [l/s] x 3,6

Δp_i [Pa]: Measuring pressure
 Måletryk
 Mättryck
 Mitattu paine-ero
 Gemessene Druckdifferenz
 Perdita di carico misurata
 Перепад давления по измерениям
 Pression mesurée

3 Calculate q_v using formula or find q_v in diagram on next page
 Beregn q_v med formel eller aflæs q_v i diagram på næste side
 Beräkna q_v med formeln eller avläs q_v i diagrammet på nästa sida
 Lasko q_v kaavan avulla tai katso taulukosta seuraavalta sivulta
 q_v mit Formel berechnen oder q_v im Diagram ablesen (nächste Seite).
 Calcolare q_v usando la formula o il diagramma a pagina seguente
 Расчет q_v по формуле или поиск q_v по диаграмме на следующей странице
 Calculer q_v en utilisant la formule ou trouver q_v dans le diagramme page suivante



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