

Lindab **VRA**

Installation instruction - UK
Asennusohje - FI
Montageanleitung - DE
Istruzioni di montaggio - IT
Instructions de montage - FR



Installation instruction

VRA

Product
Tuote
Produkt
Prodotto
Produit

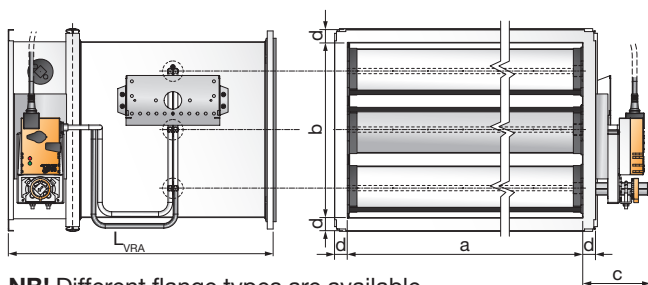
Compact model



COMPACT MODEL

Side view

Front view



NB! Different flange types are available.

Dimension table

Flange type	d mm	L _{VRA} mm	c mm
LS	20	453	115
RJFP20	20	493	115
RJFP30	30	513	115
RJFP40	40	535	115

Motor type table

Type	Motor
MP	NMV-D3-MP
KNX	NMV-D3-KNX
MOD	NMV-D3-MOD

Tightness class (Compact / Universal model)

Blade area [m ²]	Tightness class
up to 0.6	2
From 0.6	3

Tightness for damper blades according to norm EN 1751, (leakage through closed blades).

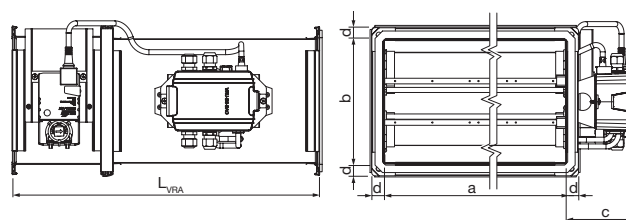
Universal model



UNIVERSAL MODEL

Side view

Front view



NB! Different flange types are available.

Dimension table

Flange type	d mm	L _{VRA} mm	c mm
LS	20	453	115
RJFP20	20	493	115
RJFP30	30	513	115
RJFP40	40	535	115

Motor type table

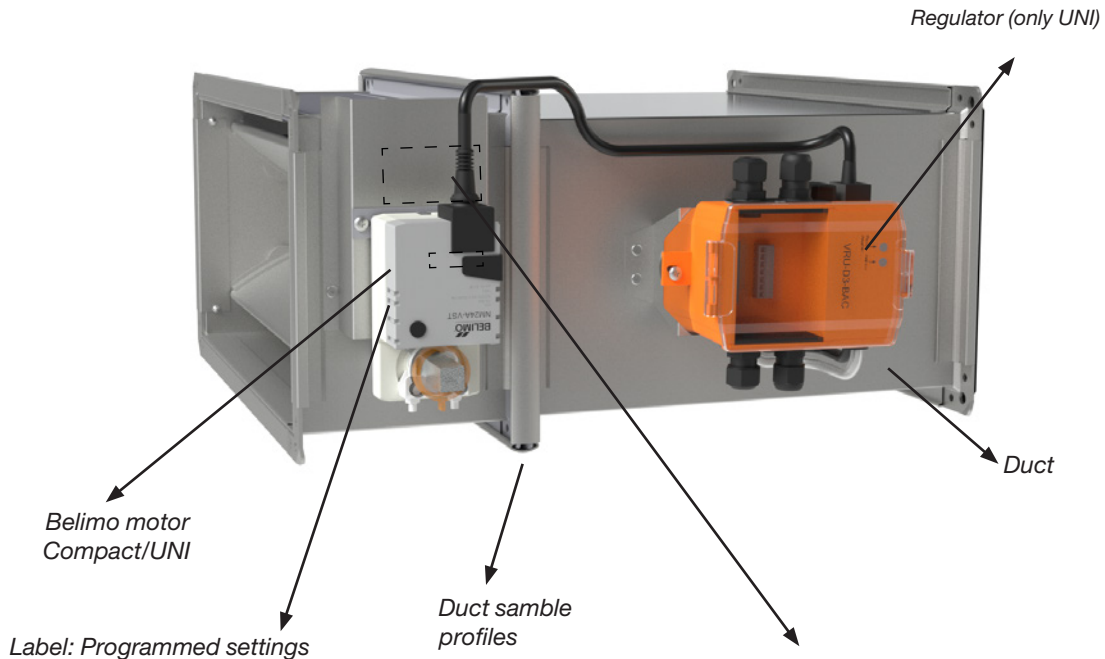
Type	Regulator	Motor
UNI	VRU-D3-BAC	NM24A-VST
UNI-M	VRU-M1-BAC	NM24A-VST
SPR	VRU-D3-BAC	NF24A-VST
SPR-M	VRU-M1-BAC	NF24A-VST
FAS	VRU-D3-BAC	NMQ-24A-VST
FAS-M	VRU-M1-BAC	NMQ-24A-VST

Tightness class: As VRA Compact
Installation: As VRA Compact.

Installation instruction

VRA

VRA in details



Label: Programmed settings
(only Compact)

```
LINDAB s.r.o.
Praha 6-Ruzyne
-----
Test
VRU-160
Vnom: 141 l/s
Δp@vnom: 56 Pa
Vmax: 141 l/s
Vmin: 0 l/s
Vmid: 70 l/s
Mode: DC 2-10 V
U5: 2-10 V
Control type:
VAV-CAV
LMV-D3-MP
Serial#:
01837-20170-158-152
28-04-2023 14:15:11
```

Product label placement:

Components	Recommended straight duct before unit
Bend	3 x d, *
Tee- piece	4 x d, *
Damper	6 x d, *

d, can be calculated by using VRA dimension a and b: $d, * = 2 \times a \times b / (a + b)$

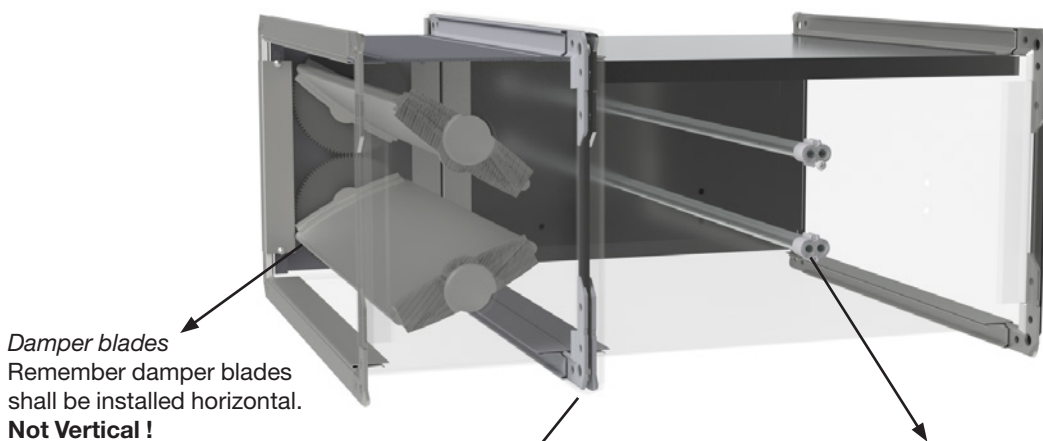
1 x d (min. 500 mm)

1 x d (min. 500 mm)

Supply

Extract

Flow direction



Damper blades
Remember damper blades shall be installed horizontal.
Not Vertical !

Joint flange profiles
[RJFP](#) or [LS-profile](#)

Measuring tubes

To avoid clogging of the measuring tubes, it is recommended to use VRA only in applications with clean air, meaning free of dust, particles and similar.

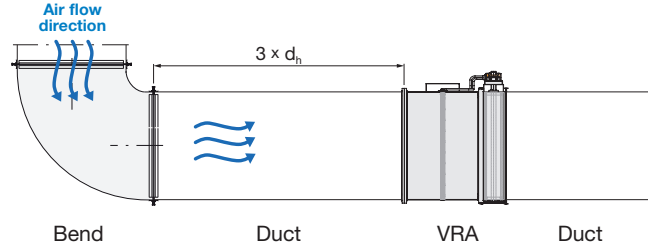


Installation instruction

VRA

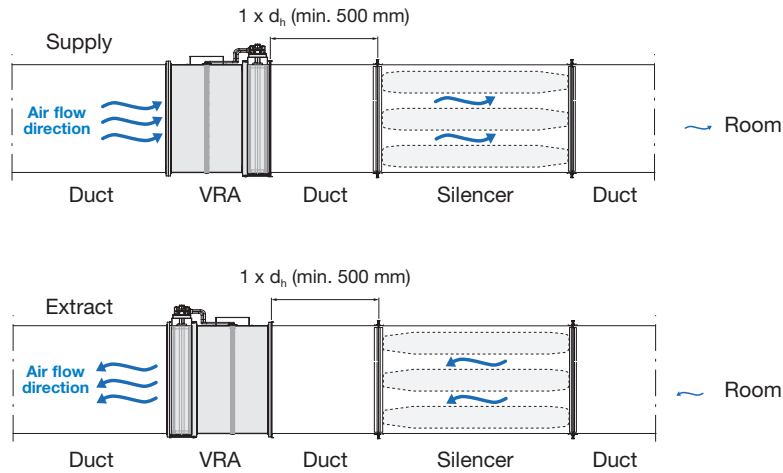
Mounting of VRA
 Kannakointi VRA
 Montage des VRA
 Montaggio di VRA
 Montage de VRA

Examples:



Example above showing recommended straight duct distance between VRA and duct bend.

Minimum recommended distance between VRA and a rectangular attenuator:



Example above showing recommended straight duct distance between VRA and rectangular attenuator. (For supply air and extract air).
NB! Distance must as a minimum be ≥ 500 mm .

Product label:

Flow measurement	
Components	Recommended straight duct before unit
Bend	$3 \times d_h^*$
Tee- piece	$4 \times d_h^*$
Damper	$6 \times d_h^*$

d_h can be calculated by using VRA dimension a and b: $d_h^* = 2 \times a \times b / (a + b)$

Flow direction

Assembly - rectangular air duct systems:

Using LS-profile. Assembly instruction, please go to Lindab Rectangular air duct systems, [LS-profile](#).

Using RJFP-profiles. Assembly instruction, please go to Lindab Rectangular duct systems, [RJFP-profile](#).



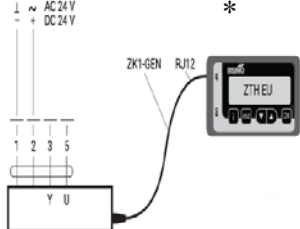
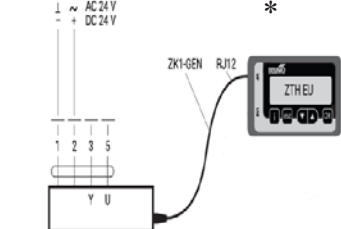
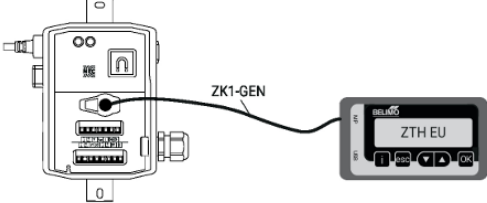
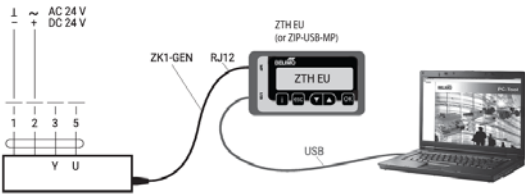
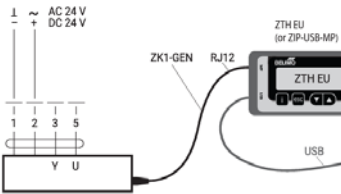
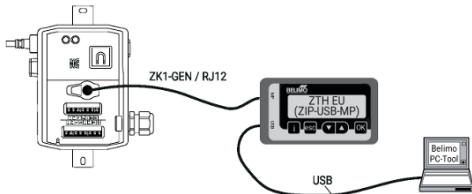
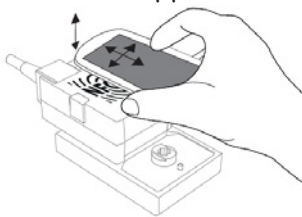
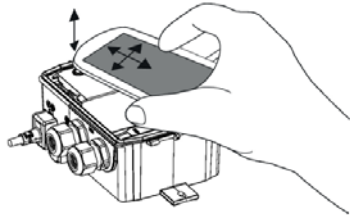
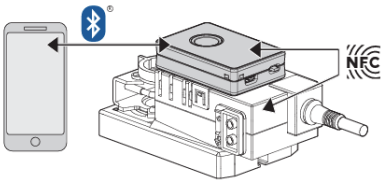
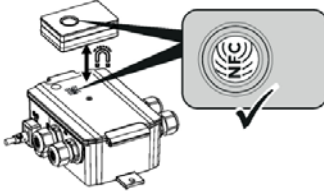
VRA is prepared for insulation with 50 mm thick insulation material. VRA can only be installed with damper blades in a horizontal position.

You can find general information about air duct systems, theory and calculations following this [link](#).

Installation instruction

VRA

Balancing
Säätöohjeet
Einregulierung
Bilanciamento
Réglage

	Compact VAV controllers MF / MP / MOD / KNX 	Universal controllers UNI(-M) / SPR(-M) / FAS(-M) 
Belimo Service Tool ZTH-EU 		
Belimo PC-Tool MFT-P via ZTH-EU 		
Belimo Assistant App with NFC 		
Belimo Assistant App with Bluetooth via ZIP-BT-NFC 		
Note *)	Modbus/Bacnet/KNX settings must be done with ZTH-EU.	Modbus/Bacnet/KNX settings can be done with ZTH-EU, PC-Tool, or Belimo Assistant App.
Note **)	Belimo Assistant App only works with the Compact MP controllers, not MF / MOD / KNX.	Belimo Assistant App works with all Universal controllers.

Installation instruction

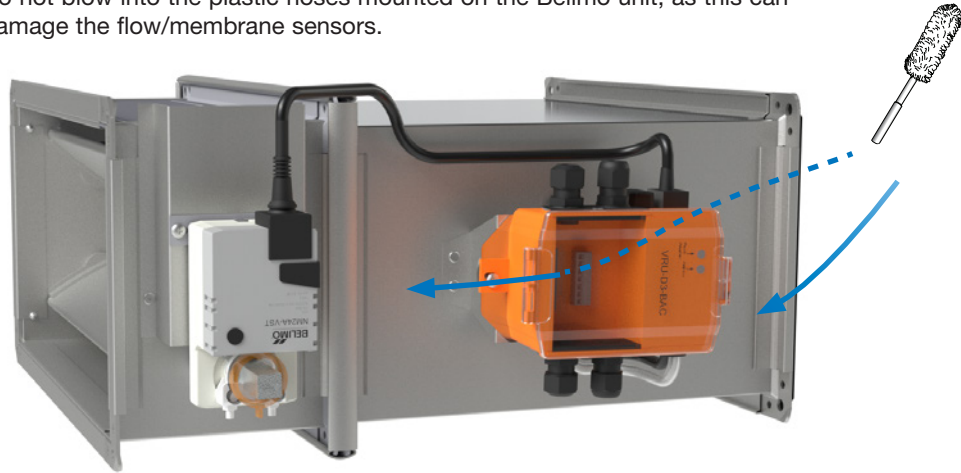
VRA

Maintenance:
Huolto
Wartung
Manutenzione
Entretien

Cleaning of measuring cross

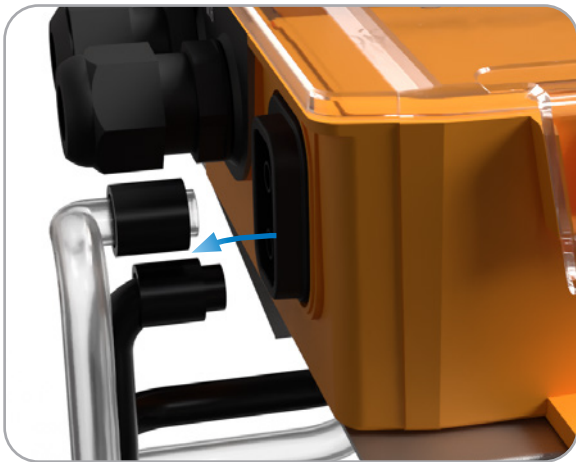
The visible parts of the product can be wiped with a damp cloth. Remove pressure hoses and blow clean air into the aluminum pipes.

Do not blow into the plastic hoses mounted on the Belimo unit, as this can damage the flow/membrane sensors.



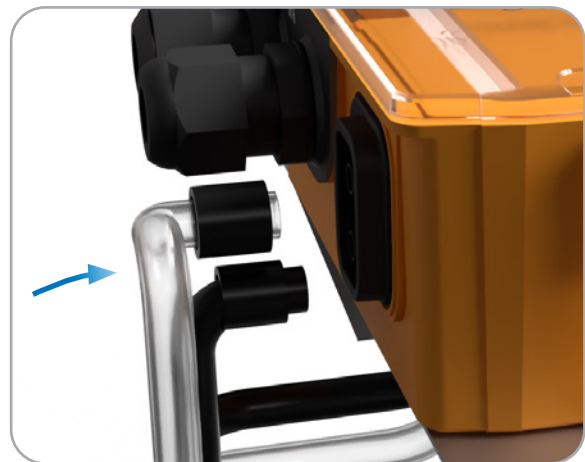
Cleaning the measuring cross

Please demount the hoses and use clean air to clean the hoses and measuring cross.



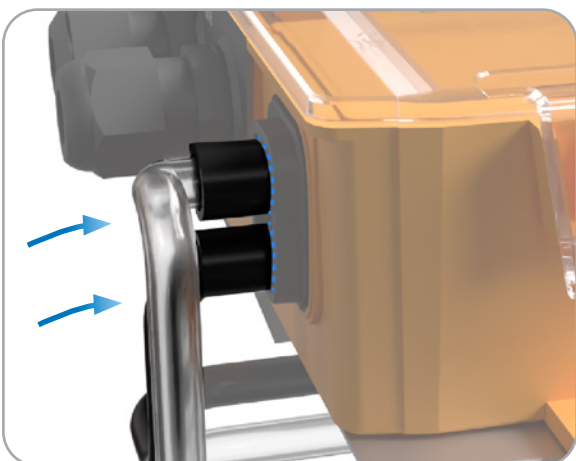
Mounting hoses

Put the hoses back followed by squeezing the black tightness rings back.



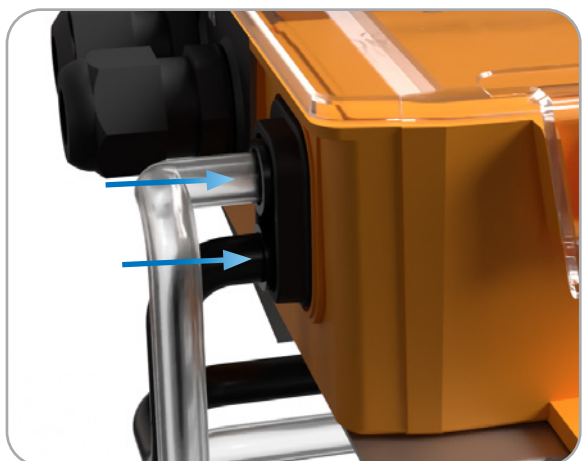
Mounting hoses step 1

Put the hoses back.



Mounting hoses step 2

Squeeze the black tightness rings back.





Most of us spend the majority of our time indoors. Indoor climate is crucial to how we feel, how productive we are and if we stay healthy.

We at Lindab have therefore made it our most important objective to contribute to an indoor climate that improves people's lives. We do this by developing energy-efficient ventilation solutions and durable building products. We also aim to contribute to a better climate for our planet by working in a way that is sustainable for both people and the environment.

[Lindab](#) | For a better climate