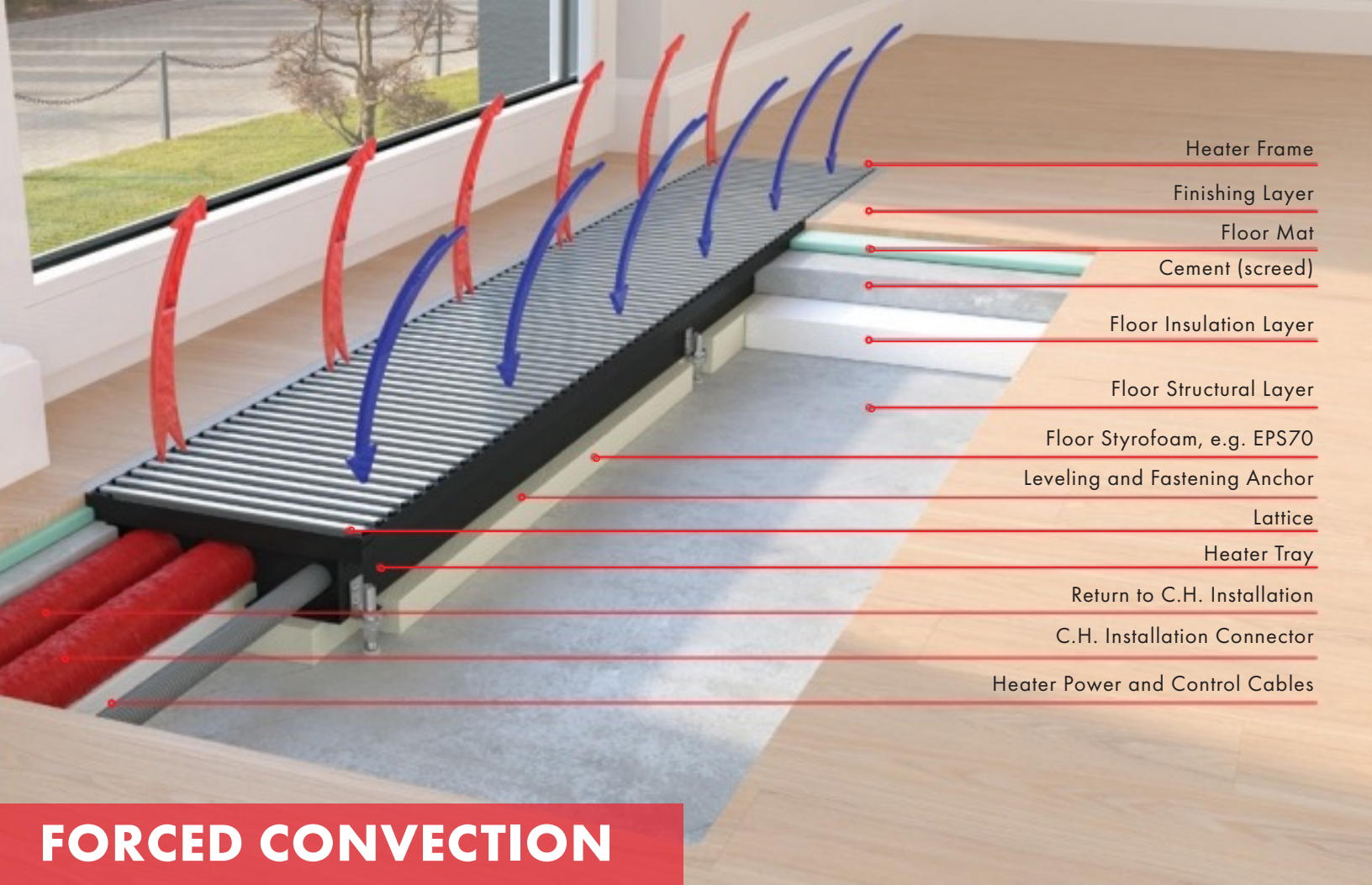


# VKN TRENCH FAN COIL HEATERS

MDL: PROFESSIONAL GRADE HVAC SOLUTIONS



## FORCED CONVECTION

### FORCED CONVECTION TRENCH HEATERS

Convection heating systems rely on heat absorption via air particles flowing through a heat exchanger. The difference in density between cold and heated air creates a delicate current that initiates the airflow in the exchanger. Forced convection is used in our fan assisted trench heaters, are low weight, have lower water capacity and lower thermal inertia. These heaters are simple in their operation, and allow for quick reaction times to changes in space heating demand.

The heater's fan increases the airstream flowing through the exchanger, resulting in higher dynamics of heat transfer and a substantial increase in heating power.

The heater's operation is regulated through the simultaneous change of the fan's rotational speed and the thermostatic valve via an actuator. The fan and the actuator can be managed by a room controller, which can be programmed according to the user's preferences.

The heater's automatic system initiates heating mode only if it is required, which allows for significant energy savings and lowers the overall operating cost of the building.

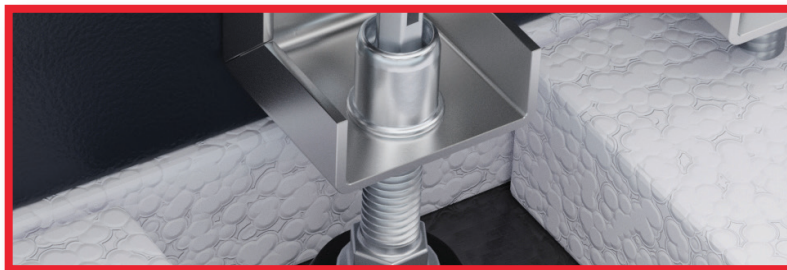
The fans used in MDL Verano products are equipped with low-voltage EC motors that allow for silent, safe and easy adjustment of the heater.

# OUR ADVANTAGES



## HIGHLY EFFICIENT HEAT EXCHANGER

Through research and development, we have optimized the sizes of our heat exchangers. As a result, we have increased the product heating output by 10 to 20%, depending on the unit length and height.



## TRAY POSITION ADJUSTMENT

Adjustable legs allow for easy adjustment and leveling of heater height.



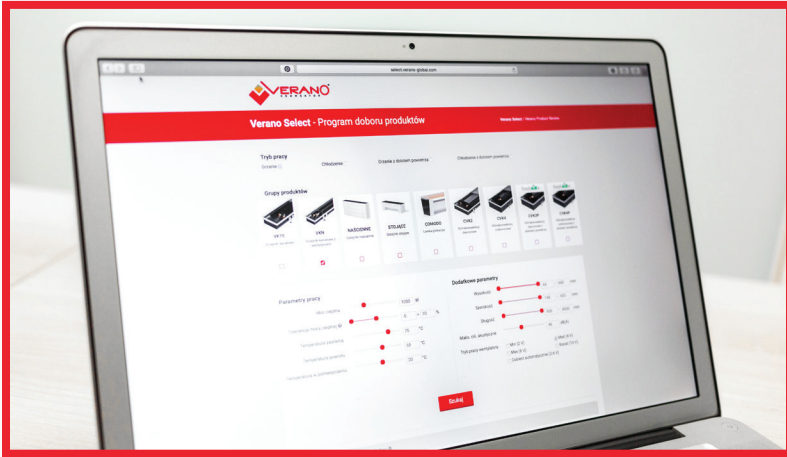
## DEDICATED CONTROL SYSTEM

Modern room controllers allow for full control of heater operations.



## MODERN EC FANS

24 V DC fan motors provide quicker and quieter air distribution, resulting in a safe product with hassle-free installation and maintenance.



## TOOLS FOR DESIGNERS

We offer full product support, including dedicated CPD seminars, as well as access to BIM drawings and libraries at the project design stage.



## TECHNICAL ADVICE

We provide help and expert advice throughout the project, from the design stage to the completion of construction.



## CUSTOM OPTIONS

We can design our heaters to fit rooms with different shapes and requirements.



## WIDE SELECTION OF FINISHES

We provide a wide selection of types and colours of grilles and frames.

# CONFIRMED QUALITY

Through years of research and analyses, including the Warsaw, Krakow and Lublin Universities of Technology, the Polish Academy of Sciences and our own research, we developed high class heating and heating-cooling devices.

Our devices increase the energy efficiency of hot/cold air supply and significantly increase the efficiency of low-temperature systems that they work with

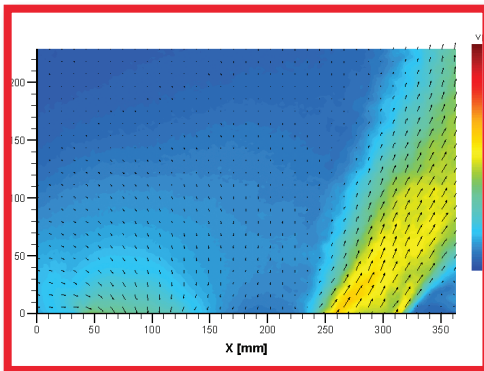
The technical parameters of our products were confirmed in tests conducted by HEATEST s.r.o. and the Heizung-Lüftung-Klimatechnik Stuttgart at the Institut für Gebäude Energetik Universität Stuttgart.

Our heaters are designed for heating residential homes (both detached homes and apartment buildings), as well as offices, retail centers, hotels, sports complexes, swimming pools and much more.

Our accurate technical designs ensure the optimal choice of product size, proper installation and hydraulic adjustment, which result in easy operation and energy savings. Verano heaters hold all the required EU documents:

- Technical approval and declaration of operating characteristics pursuant to the EN 16430 Standard.
- PZH hygiene attest.

# RESEARCH AND DEVELOPMENT

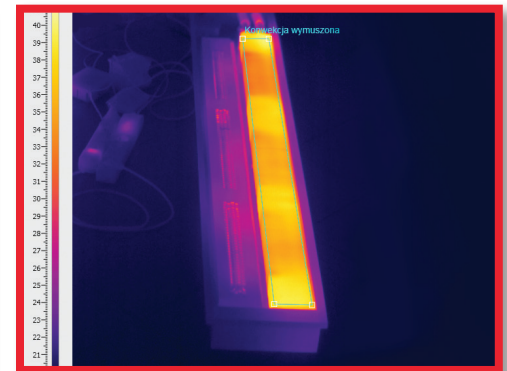


Airspeed analysis is one of the basic parameters that influence the heating power of our products. By measuring the distribution of airspeeds, we can eliminate detrimental operational factors common to trench heaters, such as the appearance of zones with very low airspeed and the cycling of already heated air.

The VKN trench heaters are characterized by airflow. This allows reduced airspeed in occupied areas to generally acceptable levels and largely reduces the risk of drafts.



All R&D that concern our VKN trench heaters are conducted in the specially constructed and prepared climatic chamber that ensures that all compliance standards according to BS/EN 16430-2 are rigorously met.



The VKN trench heaters have been recognized for high efficiency at rated heating capacity. The temperature pattern at the surface of the heat exchanger has been thoroughly examined. It has been confirmed that there is an effective heat transfer from the outer heat exchanger to the airflow from the fan.

The manufacturer reserves the right to make changes to the design, colour and specifications of the product shown. All images are for illustrative purposes only and some features such as grilles are optional accessories and not considered as standard equipment.

# PRODUCT SPECIFICATIONS

## STANDARD FEATURES

- Casing made of zinc-magnesium galvanized steel, powder coated in black RAL 9005
- Highly efficient copper-aluminum heat exchanger with air vent
- Modern fan with silent and efficient 24 V DC EC motor
- Connection space cover
- Fan cover with airstream perforations
- 1/2" connection threads
- Assembly struts
- Fixing anchors
- Condensate tray
- Connector for condensate drainage
- Trench positioning adjustment system
- Tray position adjustment system

## OPTIONAL FEATURES

- Casing powder coated in any RAL colour
- Drainage pump
- Stainless steel grille
- Assembly fibreboard cover to protect inside of the unit in transport or during assembly
- Raised floor support system
- Adjustable casing edge
- Casing protective film
- Foil sleeve for heat exchanger
- Anti-dust filter in black painting installed on fan (increases height by 0.4 inches)
- BMS controls
- Decorative frame (F or L-type) made of natural or anodized aluminum
- Decorative grille made of natural or anodized aluminum, roll-up or linear type
- Connection set: PICV valve, 0-10 V thermal actuator, lockshield valve





**HARBOUR PLAZA**  
TORONTO

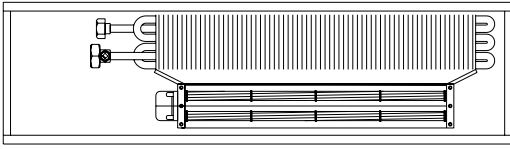


The material and color changes to the design, color and specifications of the product shown. All images are for illustrative purposes only and some features such as glass are optional. All images are not considered part of the contract.

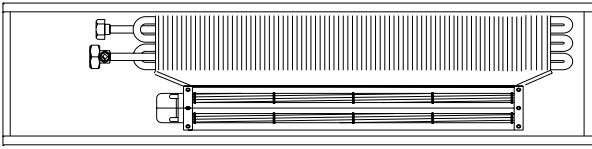
# VKN LENGTHS

Non-standard (NS) length heaters can be made to order. Please consult with MDL Solutions.

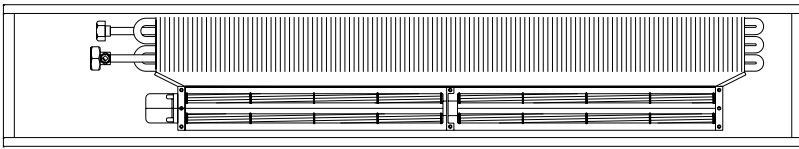
37-1/2



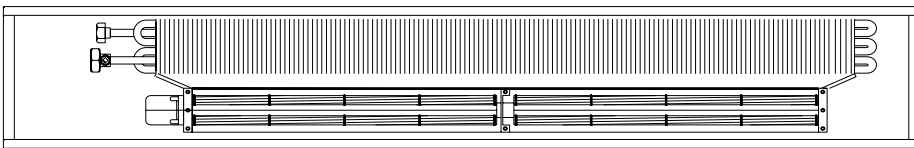
43-1/3



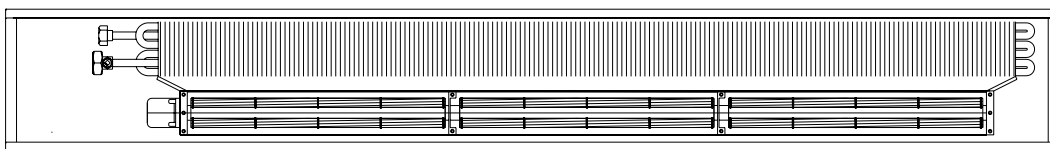
49



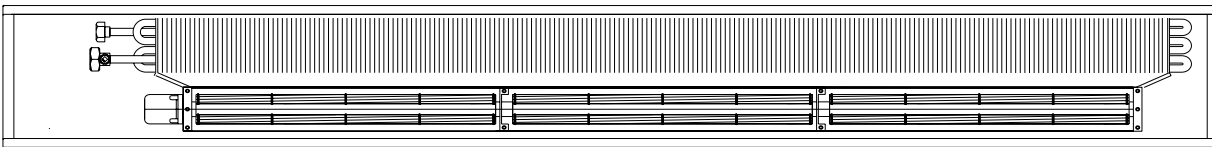
57-1/8



65



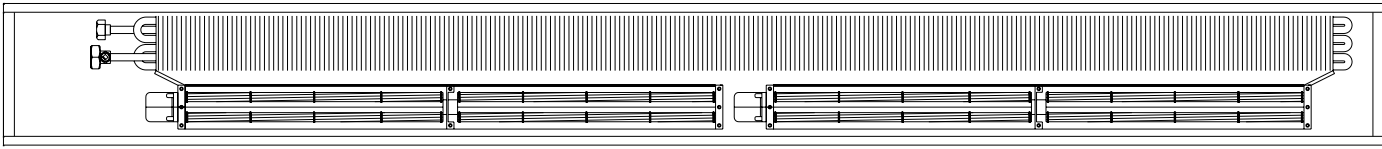
70-3/4



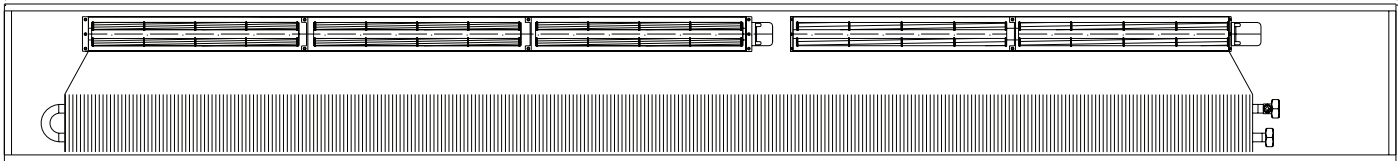
DIMENSIONS ARE IN INCHES



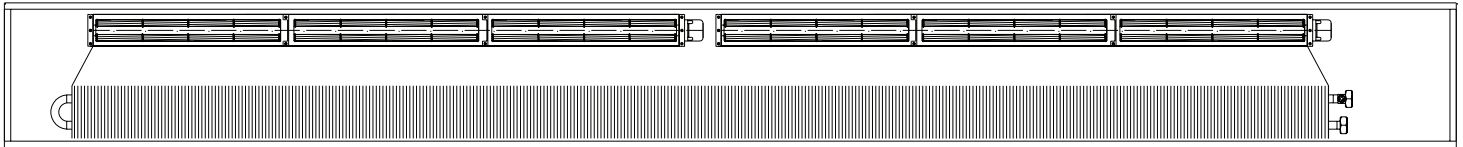
78-3/4



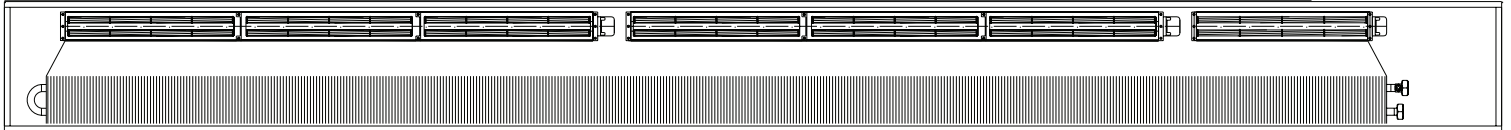
84-1/2



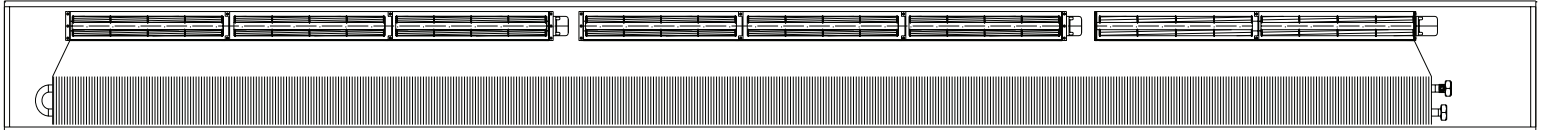
90-1/2



98-1/2



108-1/2



DIMENSIONS ARE IN INCHES

# QUICK REFERENCE HEATING OUTPUTS FOR VKN

The manufacturer reserves the right to make changes to the design, colour and specifications of the product shown. All images are for illustrative purposes only and some features such as grilles are optional accessories and not considered as standard equipment.

MDL #	RECESS HEIGHT	LENGTH	2P /4P	DEPTH	POWER SIZING	P-DROP	140/120/68 °F				
	INCH	INCH	HX	INCH	WATTS	FT-H2O	HEATING BTU/H	FLOWRATE USGPM	BTU/H PER FOOT	AIRFLOW CFM	
VKN5-6.5/14/950	2.5	37.5	2-PIPE	5.5	6	0.12	2851	0.29	1200	100	
VKN5-6.5/14/1100		43.5	2-PIPE		7	0.16	3328	0.33	1158	175	
VKN5-6.5/14/1250		49	2-PIPE		9.2	0.26	4269	0.43	1281	255	
VKN5-6.5/14/1450		57	2-PIPE		10.5	0.34	4941	0.49	1235	345	
VKN5-6.5/14/1650		65	2-PIPE		12	0.43	5657	0.57	1212	425	
VKN5-6.5/14/1800		71	2-PIPE		13	0.59	6653	0.67	1288	500	
VKN5-6.5/14/2000		78.5	2-PIPE		15.2	0.73	7522	0.75	1299	576	
VKN5-6.5/17/950		37.5	2-PIPE		6.5	6	0.18	3526	0.35	1485	100
VKN5-6.5/17/1100		43.5	2-PIPE	7		0.24	4136	0.41	1439	175	
VKN5-6.5/17/1250		49	2-PIPE	9.2		0.38	5306	0.53	1592	255	
VKN5-6.5/17/1450		57	2-PIPE	10.5		0.51	6145	0.61	1536	345	
VKN5-6.5/17/1650		65	2-PIPE	12		0.65	7038	0.70	1508	425	
VKN5-6.5/17/1800		71	2-PIPE	13		0.88	8276	0.83	1602	500	
VKN5-6.5/17/2000		78.5	2-PIPE	15.2		0.99	8821	0.88	1523	576	
VKN5-09/14/950		3.5	37.5	2-PIPE		5.5	8.5	0.12	2878	0.29	1212
VKN5-09/14/1100			43.5	2-PIPE	10.8		0.17	3379	0.34	1175	175
VKN5-09/14/1250	49		2-PIPE	14.4	0.26		4334	0.43	1300	255	
VKN5-09/14/1450	57		2-PIPE	21.6	0.35		5019	0.50	1255	345	
VKN5-09/14/1650	65		2-PIPE	25.2	0.49		6063	0.61	1299	425	
VKN5-09/14/1800	71		2-PIPE	28.8	0.66		7076	0.71	1369	500	
VKN5-09/14/2000	78.5		2-PIPE	37.2	0.73		7522	0.75	1299	576	
VKN5-09/17/950	37.5		2-PIPE	6.5	8.5		0.33	4903	0.49	2065	100
VKN5-09/17/1100	43.5		2-PIPE		10.8	0.45	5756	0.58	2002	175	
VKN5-09/17/1250	49		2-PIPE		14.4	0.71	7386	0.74	2216	255	
VKN5-09/17/1450	57		2-PIPE		21.6	0.93	8549	0.85	2137	345	
VKN5-09/17/1650	65		2-PIPE		25.2	1.20	9793	0.98	2099	425	
VKN5-09/17/1800	71		2-PIPE		28.8	1.62	11515	1.15	229	500	
VKN5-09/17/2000	78.5		2-PIPE		37.2	1.82	12276	1.23	2120	576	
VKN5-7.5/25/950	3		37.5		2-PIPE	10	6	0.13	2970	0.30	1251
VKN5-7.5/25/1100			43.5	2-PIPE	7		0.18	3495	0.35	1216	175
VKN5-7.5/25/1250		49	2-PIPE	9.5	0.25		4484	0.45	1345	255	
VKN5-7.5/25/1450		57	2-PIPE	10.5	0.37		5190	0.52	1297	345	
VKN5-7.5/25/1650		65	2-PIPE	12	0.47		5940	0.59	1273	425	
VKN5-7.5/25/1800		71	2-PIPE	13	0.64		6987	0.70	1352	500	
VKN5-7.5/25/2000		78.5	2-PIPE	15.2	0.72		7451	0.75	1286	576	
VKN5-7.5/25/2150		84.5	2-PIPE	16.5	0.86		8211	0.82	1305	518	
VKN5-7.5/25/2300		90.5	2-PIPE	18.5	1.01		8954	0.90	1318	518	
VKN5-7.5/25/2500		98.5	2-PIPE	19.5	1.17		9674	0.97	1297	518	
VKN5-7.5/25/2750		108.5	2-PIPE	21.5	1.40		10653	1.07	1285	518	

MDL #	RECESS HEIGHT	LENGTH	2P /4P	DEPTH	POWER SIZING	P-DROP	140/120/68 °F			
	INCH	INCH	HX	INCH	WATTS	FT-H2O	HEATING BTU/H	FLOWRATE USGPM	BTU/H PER FOOT	AIRFLOW CFM
VKN5-09/25/950	3.5	37.5	2-PIPE	10	18	0.33	4859	0.49	2046	100
VKN5-09/25/1100		43.5	2-PIPE		21	0.44	5705	0.57	1984	175
VKN5-09/25/1250		49	2-PIPE		26.5	0.70	7318	0.73	2195	255
VKN5-09/25/1450		57	2-PIPE		31	0.92	8474	0.85	2118	345
VKN5-09/25/1650		65	2-PIPE		36	1.18	9701	0.97	2079	425
VKN5-09/25/1800		71	2-PIPE		39	1.59	11410	1.14	2208	500
VKN5-09/25/2000		78.5	2-PIPE		45	1.79	12160	1.22	2100	576
VKN5-09/25/2150		84.5	2-PIPE		49	2.14	13404	1.34	2130	518
VKN5-09/25/2300		90.5	2-PIPE		53	2.52	14622	1.46	2153	518
VKN5-09/25/2500		98.5	2-PIPE		58	2.90	15791	1.58	2117	518
VKN5-09/25/2750		108.5	2-PIPE		63	3.47	17387	1.74	2097	518
VKN5-7.5/35/950		3	37.5		2-PIPE	14	6	0.20	3707	0.37
VKN5-7.5/35/1100	43.5		2-PIPE	7	0.27		4348	0.43	1512	175
VKN5-7.5/35/1250	49		2-PIPE	9.5	0.42		5579	0.56	1674	255
VKN5-7.5/35/1450	57		2-PIPE	10.5	0.55		6462	0.65	1615	345
VKN5-7.5/35/1650	65		2-PIPE	12	0.71		7399	0.74	1586	425
VKN5-7.5/35/1800	71		2-PIPE	13	0.96		8699	0.87	1684	500
VKN5-7.5/35/2000	78.5		2-PIPE	15.2	1.08		9272	0.93	1601	576
VKN5-7.5/35/2150	84.5		2-PIPE	16.5	1.30		10226	1.02	1625	518
VKN5-7.5/35/2300	90.5		2-PIPE	18.5	1.52		11150	1.12	1642	518
VKN5-7.5/35/2500	98.5		2-PIPE	19.5	1.76		12040	1.20	1614	518
VKN5-7.5/35/2750	108.5		2-PIPE	21.5	2.10		13261	1.33	1599	518
VKN5-09/35/950	3.5		37.5	2-PIPE	14		18	0.63	6908	0.69
VKN5-09/35/1100		43.5	2-PIPE	21		0.84	8109	0.81	2820	175
VKN5-09/35/1250		49	2-PIPE	26.5		1.34	10407	1.04	3122	255
VKN5-09/35/1450		57	2-PIPE	31		1.76	12044	1.20	3011	345
VKN5-09/35/1650		65	2-PIPE	36		2.26	13793	1.38	2956	425
VKN5-09/35/1800		71	2-PIPE	39		3.05	16217	1.62	3139	500
VKN5-09/35/2000		78.5	2-PIPE	45		3.43	17288	1.73	2985	576
VKN5-09/35/2150		84.5	2-PIPE	49		4.11	19061	1.91	3030	518
VKN5-09/35/2300		90.5	2-PIPE	53		4.83	20787	2.08	3061	518
VKN5-09/35/2500		98.5	2-PIPE	58		5.57	22447	2.24	3010	518
VKN5-09/35/2750		108.5	2-PIPE	63		6.66	24722	2.47	2982	518

1. Above table shows outputs at fan full speed only. Outputs at medium and minimum speed in following tables.
2. Standard heating output compliant to EN-16430 for room air temperature of 68°F
3. For all tables: Working Fluid is pure water. Entering Water = 140°F, Leaving Water = 120°F. For outputs with Glycol solution and/or different EWT/LWT, please consult MDL Solutions.

The manufacturer reserves the right to make changes to the design, colour and specifications of the product shown. All images are for illustrative purposes only and some features such as grilles are optional accessories and not considered as standard equipment.



The manufacturer reserves the right to make changes to the design, colour and specifications of the product shown. All images are for



**INSPIR RETIREMENT**  
NEW YORK

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## VKN HEIGHT 2.5 INCHES

### DIMENSIONS

DIMENSIONS	[INCH]
Trench Height	2.5
Trench Width	5.5, 6.5
Trench Length (Lk)	37.5 - 78.5

Non-standard (NS) length heaters can be made on order.

### EXAMPLE OF ORDER CODE

**VKN5-6.5/ 14/Lk (L/R)**

Trench Length  
Lk[in]

Connection Side

L-Left  
R-Right

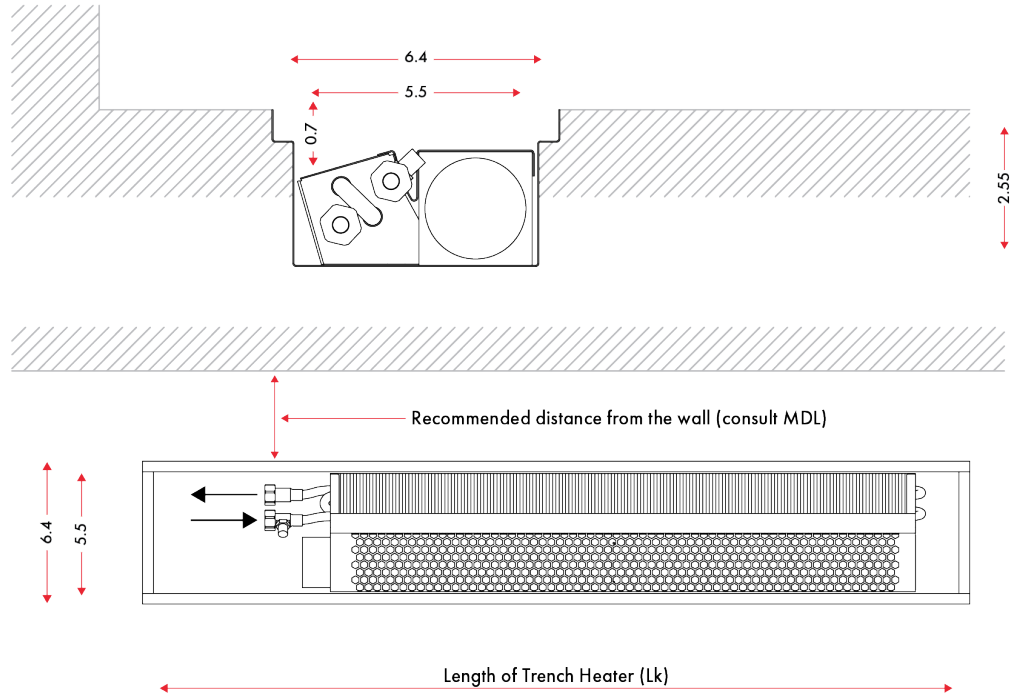
# VKN - HEIGHT 2.5 INCHES - WIDTH 5.5 INCHES

ORDER CODE: VKN5-6.5/14/Lk

DIMENSIONS	UNIT [INCHES]
Trench Height	2.5
Trench Width	5.5
Grille Width (Bk)	6.4
Trench Length (Lk)	37.5-78.5

CONNECTIONS	TYPE
Connectors	0.5" NPT Threads
Connection Side	Left(L) standard Right(R) optional

ACCESSORIES	TYPE
Grille H=0.7"	Roll-up/linear/ modular
Frames	L or F
Additional Accessories	Assembly cover, assembly set for raised floor, bimetal temperature sensor, adjustable edge



DIMENSIONS ARE IN INCHES

MODEL NUMBER	L INCH (MM)	WATTS	MAX SOUND ALEVEL Lp (dBA)	MAX SOUND POWER LEVEL Lp (dBA)	FAN SPEED	VOLTS (0-10)	AIRFLOW CFM	140/120/68 °F	
								HEATING BTU/h	FLOWRATE UsGPM
VKN-6.5/14/950	37.5(900)	6	40	48	Max	10V	100	2851	0.29
			28	36	Med	5V	75	1800	0.18
			18	26	Min	3V	35	1050	<0.15
VKN-6.5/14/1100	43.5(1100)	7	40	48	Max	10V	175	3328	0.33
			28	36	Med	5V	140	2114	0.21
			18	26	Min	3V	60	1374	<0.15
VKN-6.5/14/1250	49 (1250)	9.2	40	48	Max	10V	255	4269	0.43
			28	36	Med	5V	205	2714	0.27
			18	26	Min	3V	90	1582	0.16
VKN-6.5/14/1450	57(1450)	10.5	40	48	Max	10V	345	4941	0.49
			28	36	Med	5V	275	3141	0.31
			18	26	Min	3V	120	1831	0.18
VKN-6.5/14/1650	65(1650)	12	43	51	Max	10V	425	5657	0.57
			31	39	Med	5V	345	3601	0.26
			21	29	Min	3V	155	2100	0.21
VKN-6.5/14/1800	71(1800)	13	43	51	Max	10V	500	6653	0.67
			31	39	Med	5V	400	4232	0.42
			21	29	Min	3V	200	2465	0.25
VKN-6.5/14/2000	78.5(2000)	15.2	43	51	Max	10V	576	7522	0.75
			31	39	Med	5V	495	4511	0.45
			21	29	Min	3V	251	2632	0.26

- Standard heating output compliant to EN-16430 for room temperature of 68°F
- Sound power levels according to ISO-3745 standard, sound pressure level measured at distance of 6.5ft to the unit, in a 3531.5ft³ volume room. Reverb time - 0.5s, room damping - 8dB(A)

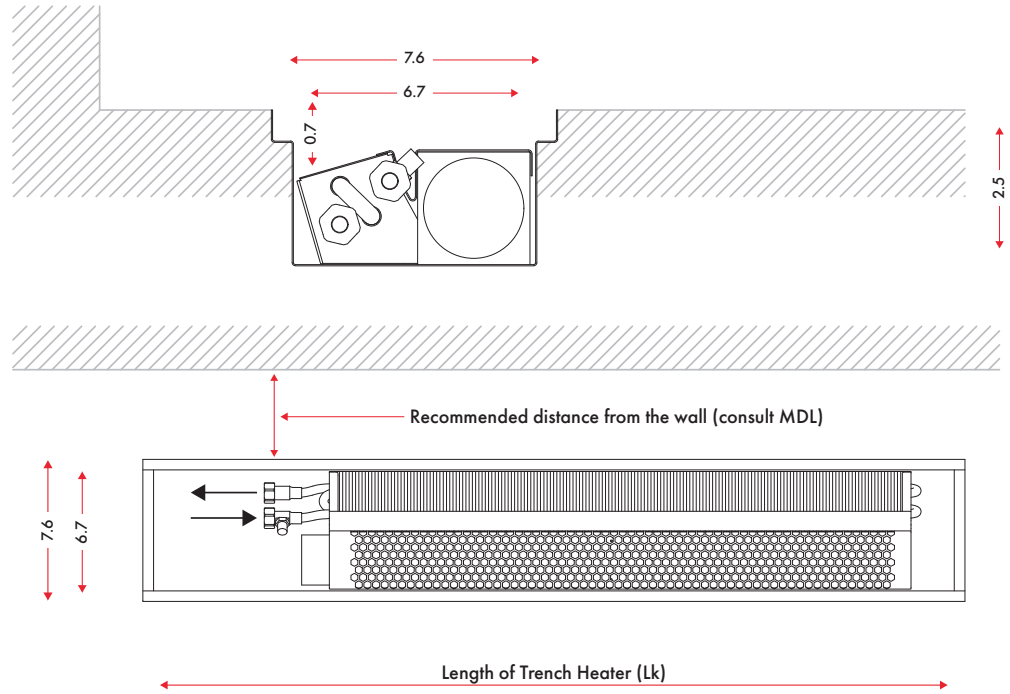
# VKN - HEIGHT 2.5 INCHES - WIDTH 6.5 INCHES

ORDER CODE: VKN5-6.5/17/Lk

DIMENSIONS	UNIT [INCHES]
Trench Height	2.5
Trench Width	6.7
Grille Width (Bk)	7.6
Trench Length (Lk)	37.5 - 78.5

CONNECTIONS	TYPE
Connectors	0.5" NPT Threads
Connection Side	Left(L) standard Right(R) optional

ACCESSORIES	TYPE
Grille H=0.7"	Roll-up/linear/ modular
Frames	L or F
Additional Accessories	Assembly cover, assembly set for raised floor, bimetal temperature sensor, adjustable edge



DIMENSIONS ARE IN INCHES

MODEL NUMBER	L INCH (MM)	WATTS	MAX SOUND ALEVEL Lp (dBA)	MAX SOUND POWER LEVEL Lp (dBA)	FAN SPEED	VOLTS (0-10)	AIRFLOW CFM	140/120/68 °F	
								HEATING BTU/h	FLOWRATE UsGPM
VKN-6.5/17/950	37.5(900)	6	40	48	Max	10V	100	3526	0.35
			28	36	Med	5V	75	2217	0.23
			18	26	Min	3V	35	1313	<0.15
VKN-6.5/17/1100	43.5(1100)	7	40	48	Max	10V	175	4136	0.41
			28	36	Med	5V	140	2667	0.27
			18	26	Min	3V	60	1541	0.15
VKN-6.5/17/1250	49 (1250)	9.2	40	48	Max	10V	255	5306	0.53
			28	36	Med	5V	205	3424	0.34
			18	26	Min	3V	90	1978	0.20
VKN-6.5/17/1450	57(1450)	10.5	40	48	Max	10V	345	6145	0.61
			28	36	Med	5V	275	3962	0.40
			18	26	Min	3V	120	2291	0.23
VKN-6.5/17/1650	65(1650)	12	43	51	Max	10V	425	7038	0.70
			31	39	Med	5V	345	4535	0.45
			21	29	Min	3V	155	2738	0.27
VKN-6.5/17/1800	71(1800)	13	43	51	Max	10V	500	8276	0.83
			31	39	Med	5V	400	5336	0.53
			21	29	Min	3V	200	3086	0.31
VKN-6.5/17/2000	78.5(2000)	15.2	43	51	Max	10V	576	8821	0.88
			31	39	Med	5V	495	5688	0.57
			21	29	Min	3V	251	3287	0.33

- Standard heating output compliant to EN-16430 for room temperature of 68°F
- Sound power levels according to ISO-3745 standard, sound pressure level measured at distance of 6.5ft to the unit, in a 3531.5ft³ volume room. Reverb time - 0.5s, room damping - 8dB(A)







## VKN HEIGHT 3.5 INCHES

### DIMENSIONS

DIMENSIONS	[INCH]
Trench Height	3.5
Trench Width	5.5, 6.5
Trench Length (Lk)	37.5 - 78.5

Non-standard (NS) length heaters can be made on order.

### EXAMPLE OF ORDER CODE

**VKN-9/ 14/Lk (L/R)**

Trench Length  
Lk[in]

Connection Side  
L-Left  
R-Right

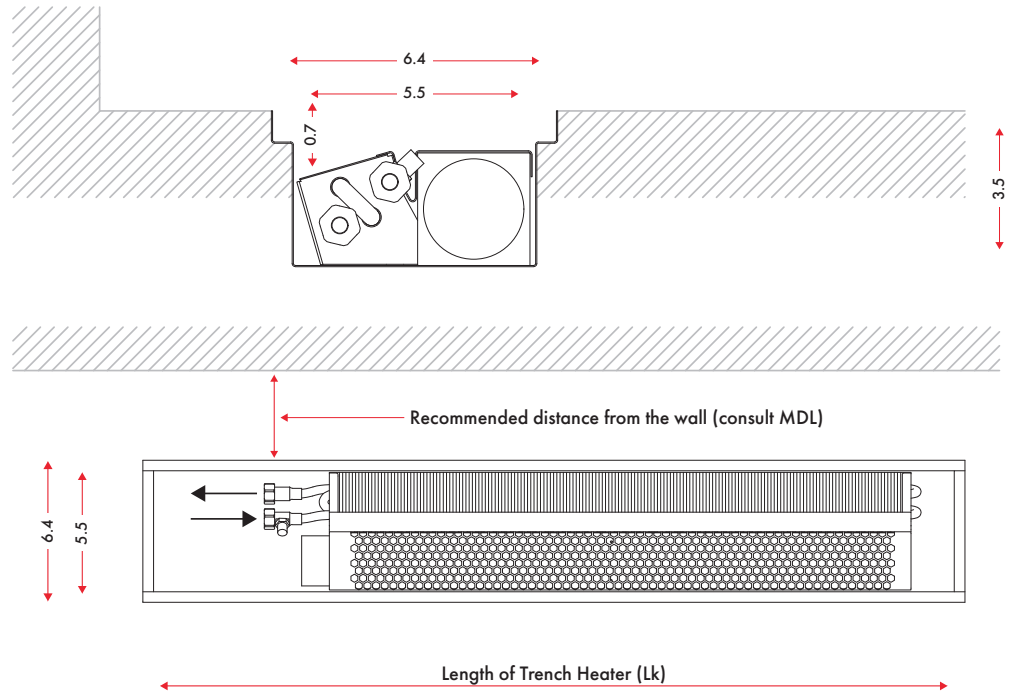
# VKN - HEIGHT 3.5 INCHES - WIDTH 5.5 INCHES

**ORDER CODE: VKN-9/14/Lk**

DIMENSIONS	UNIT [INCHES]
Trench Height	3.5
Trench Width	5.5
Grille Width (Bk)	6.4
Trench Length (Lk)	37.5 - 78.5

CONNECTIONS	TYPE
Connectors	0.5" NPT Threads
Connection Side	Left(L) standard Right(R) optional

ACCESSORIES	TYPE
Grille H=0.7"	Roll-up/linear/modular
Frames	L or F
Additional Accessories	Assembly cover, assembly set for raised floor, bimetal temperature sensor, adjustable edge



DIMENSIONS ARE IN INCHES

MODEL NUMBER	L INCH (MM)	WATTS	MAX SOUND ALEVEL Lp (dBA)	MAX SOUND POWER LEVEL Lp (dBA)	FAN SPEED	VOLTS (0-10)	AIRFLOW CFM	140/120/68 °F	
								HEATING BTU/h	FLOWRATE UsGPM
VKN-9/14/950	37.5(900)	8.5	40	48	Max	10V	100	2878	0.29
			28	36	Med	5V	75	1988	0.20
			18	26	Min	3V	35	1313	<0.15
VKN-9/14/1100	43.5(1100)	10.8	40	48	Max	10V	175	3379	0.34
			28	36	Med	5V	140	2203	0.22
			18	26	Min	3V	60	1541	0.15
VKN-9/14/1250	49 (1250)	14.4	40	48	Max	10V	255	4334	0.43
			28	36	Med	5V	205	2994	0.30
			18	26	Min	3V	90	1978	0.20
VKN-9/14/1450	57(1450)	21.6	40	48	Max	10V	345	5019	0.50
			28	36	Med	5V	275	3468	0.35
			18	26	Min	3V	120	2291	0.23
VKN-9/14/1650	65(1650)	25.2	43	51	Max	10V	425	6063	0.61
			31	39	Med	5V	345	4123	0.41
			21	29	Min	3V	155	2769	0.28
VKN-9/14/1800	71(1800)	28.8	43	51	Max	10V	500	7076	0.71
			31	39	Med	5V	400	4890	0.49
			21	29	Min	3V	200	3229	0.32
VKN-9/14/2000	78.5(2000)	37.2	43	51	Max	10V	576	7522	0.75
			31	39	Med	5V	495	5200	0.52
			21	29	Min	3V	251	3434	0.34

- Standard heating output compliant to EN-16430 for room temperature of 68 °F
- Sound power levels according to ISO-3745 standard, sound pressure level measured at distance of 6.5ft to the unit, in a 3531.5ft<sup>3</sup> volume room. Reverb time - 0.5s, room damping - 8dB(A)

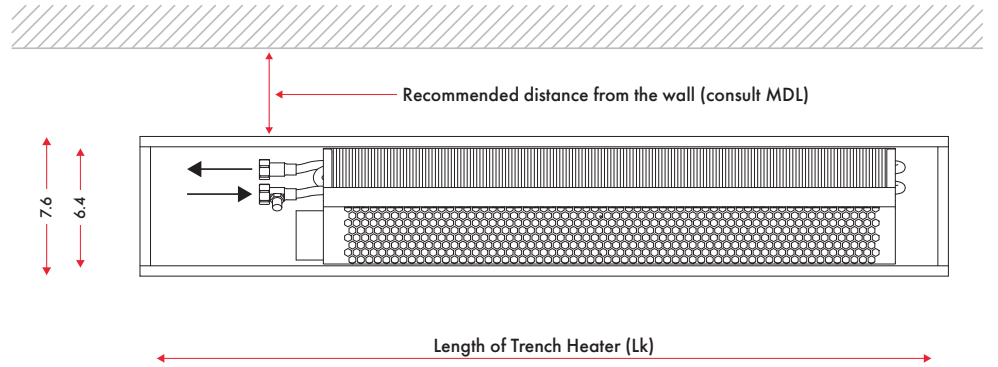
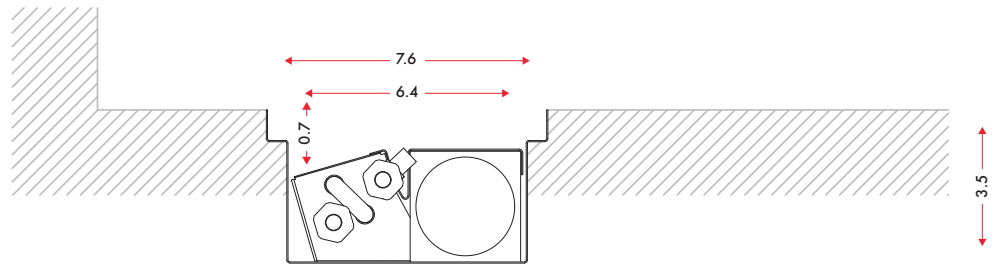
# VKN - HEIGHT 3.5 INCHES - WIDTH 6.5 INCHES

**ORDER CODE: VKN-9/17/Lk**

DIMENSIONS	UNIT [INCHES]
Trench Height	3.5
Trench Width	6.4
Grille Width (Bk)	7.6
Trench Length (Lk)	37.5-78.5

CONNECTIONS	TYPE
Connectors	0.5" NPT Threads
Connection Side	Left(L) standard Right(R) optional

ACCESSORIES	TYPE
Grille H=0.7"	Roll-up/linear/modular
Frames	L or F
Additional Accessories	Assembly cover, assembly set for raised floor, bimetal temperature sensor, adjustable edge



DIMENSIONS ARE IN INCHES

MODEL NUMBER	L INCH (MM)	WATTS	MAX SOUND ALEVEL Lp (dBA)	MAX SOUND POWER LEVEL Lp (dBA)	FAN SPEED	VOLTS (0-10)	AIRFLOW CFM	140/120/68 °F	
								HEATING BTU/h	FLOWRATE UsGPM
VKN-9/17/950	37.5(900)	8.5	40	48	Max	10V	100	4903	0.49
			28	36	Med	5V	75	3447	0.34
			18	26	Min	3V	35	2305	0.23
VKN-9/17/1100	43.5(1100)	10.8	40	48	Max	10V	175	5756	0.58
			28	36	Med	5V	140	4051	0.41
			18	26	Min	3V	60	2707	0.27
VKN-9/17/1250	49 (1250)	14.4	40	48	Max	10V	255	7386	0.74
			28	36	Med	5V	205	5197	0.52
			18	26	Min	3V	90	3471	0.35
VKN-9/17/1450	57(1450)	21.6	40	48	Max	10V	345	8549	0.85
			28	36	Med	5V	275	6018	0.60
			18	26	Min	3V	120	4020	0.40
VKN-9/17/1650	65(1650)	25.2	43	51	Max	10V	425	9793	0.98
			31	39	Med	5V	345	6888	0.69
			21	29	Min	3V	155	4603	0.46
VKN-9/17/1800	71(1800)	28.8	43	51	Max	10V	500	11515	1.15
			31	39	Med	5V	400	8102	0.81
			21	29	Min	3V	200	5412	0.54
VKN-9/17/2000	78.5(2000)	37.2	43	51	Max	10V	576	12276	1.23
			31	39	Med	5V	495	8637	0.86
			21	29	Min	3V	251	5770	0.58

- Standard heating output compliant to EN-16430 for room temperature of 68°F
  - Sound power levels according to ISO-3745 standard, sound pressure level measured at distance of 6.5ft to the unit, in a 3531.5ft³ volume room.
- Reverb time - 0.5s, room damping - 8dB(A)

# VKN - 3 INCHES HEIGHT - 10 INCHES WIDTH

**ORDER CODE: VKN-7.5/25/Lk-12**

DIMENSIONS	UNIT [INCHES]
Trench Height	3
Trench Width	9.8
Grille Width (Bk)	10.7
Trench Length (Lk)	37.5 - 108.5

CONNECTIONS	TYPE
Connection Threads	IT 0.75" one-sided
Side Connection to be Chosen	Standard Right – R Optional Left – L
Fan from the Window Side	Standard

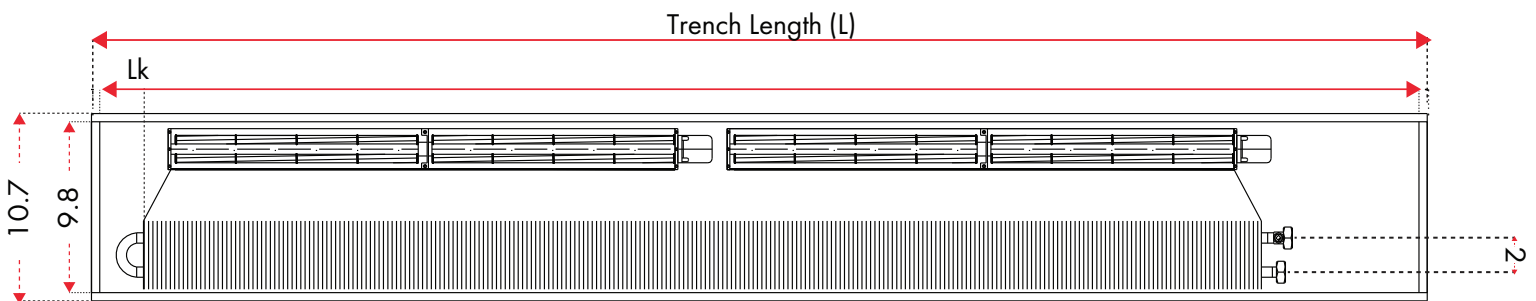
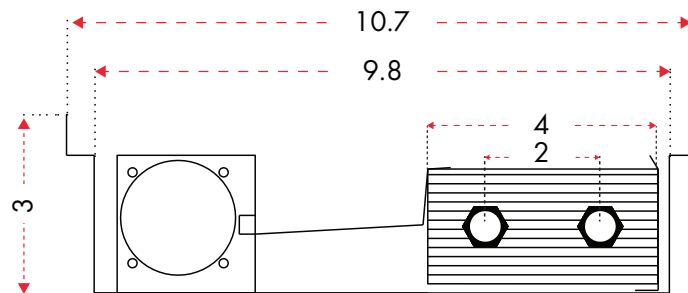
ACCESSORIES	TYPE
Grille H=0.7"	Roll-up/linear/modular
Aluminum Frame	L or F
Assembly Cover	On Request

## EXAMPLE OF ORDER CODE

**VKN-7.5/25/Lk (L/R)**

Trench Length  
Lk[in]

Connection Side  
L-Left  
R-Right



DIMENSIONS ARE IN INCHES

								140/120/68 °F	
MODEL NUMBER	L INCH (MM)	WATTS	MAX SOUND ALEVEL Lp (dBA)	MAX SOUND POWER LEVEL Lp (dBA)	FAN SPEED	VOLTS (0-10)	AIRFLOW CFM	HEATING BTU/h	FLOWRATE UsGPM
VKN-7.5/25/950	37.5(900)	6	40	48	Max	10V	100	2970	0.30
			28	36	Med	5V	75	2046	0.20
			21	29	Min	3V	35	1313	<0.15
VKN-7.5/25/1100	43.5(1100)	7	40	48	Max	10V	175	3495	0.35
			28	36	Med	5V	140	2404	0.24
			21	29	Min	3V	60	1531	0.15
VKN-7.5/25/1250	49 (1250)	9.5	40	48	Max	10V	255	4484	0.45
			28	36	Med	5V	205	3083	0.31
			21	29	Min	3V	95	1964	0.20
VKN-7.5/25/1450	57(1450)	10.5	40	48	Max	10V	345	5190	0.52
			28	36	Med	5V	275	3570	0.36
			21	29	Min	3V	120	2274	0.23
VKN-7.5/25/1650	65(1650)	12	38	46	Max	10V	425	5940	0.59
			34	26	Med	5V	345	4085	0.41
			21	29	Min	3V	155	2602	0.26
VKN-7.5/25/1800	71 (1800)	13	38	46	Max	10V	500	6987	0.70
			34	26	Med	5V	400	4805	0.48
			21	29	Min	3V	200	3062	0.31
VKN-7.5/25/2000	78.5(2000)	15.2	43	51	Max	10V	576	7451	0.75
			29	37	Med	5V	495	5122	0.51
			21	29	Min	3V	251	3263	0.33
VKN-7.5/25/2150	84.5 (2150)	16.5	43	51	Max	10V	518	8211	0.82
			29	37	Med	5V	406	5647	0.56
			21	26	Min	3V	300	3597	0.36
VKN-7.5/25/2300	90.5 (2300)	18.5	43	51	Max	10V	518	8954	0.90
			29	37	Med	5V	406	6158	0.62
			21	29	Min	3V	300	3925	0.39
VKN-7.5/25/2500	98.5 (2500)	19.5	43	51	Max	10V	518	9674	0.97
			29	37	Med	5V	406	6653	0.67
			21	29	Min	3V	300	4239	0.42
VKN-7.5/25/2750	108.5 (2750)	21.5	43	49	Max	10V	518	10653	1.07
			29	37	Med	5V	406	7324	0.73
			21	29	Min	3V	300	4665	0.47

- Standard heating output compliant to EN-16430 for room temperature of 68°F
- Sound power levels according to ISO-3745 standard, sound pressure level measured at distance of 6.5ft to the unit, in a 3531.5ft³ vol

# VKN - 3.5 INCHES HEIGHT - 10 INCHES WIDTH

ORDER CODE: VKN-9/25/Lk-12

DIMENSIONS	UNIT [INCHES]
Trench Height	3.5
Trench Width	9.8
Grille Width (Bk)	10.7
Trench Length (Lk)	37.5 - 108.5

CONNECTIONS	TYPE
Connection Threads	IT 0.75" one-sided
Side Connection to be Chosen	Standard Right – R Optional Left – L
Fan from the Window Side	Standard

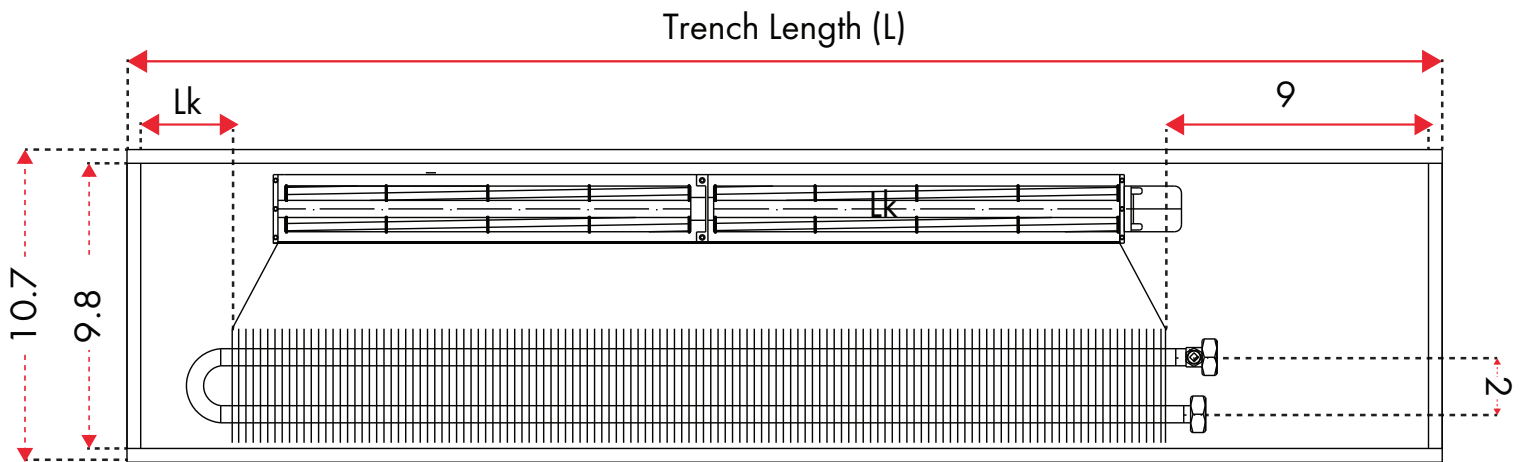
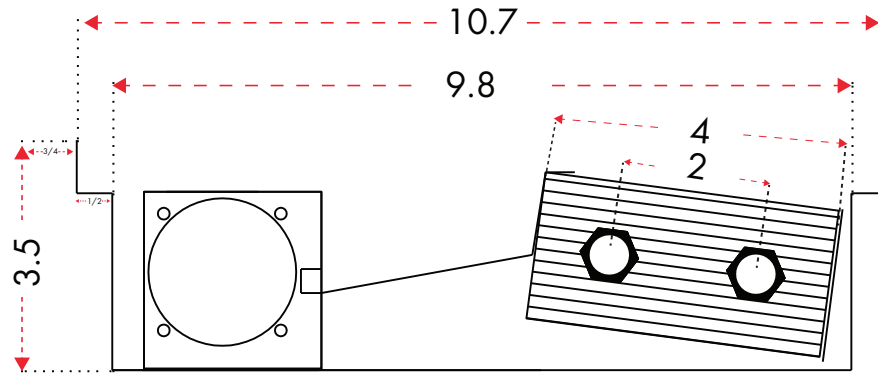
ACCESSORIES	TYPE
Grille H=0.7"	Roll-up/linear/modular
Aluminum Frame	L or F
Assembly Cover	On Request

## EXAMPLE OF ORDER CODE

**VKN-9/25/Lk (L/R)**

Trench Length Lk[in]

Connection Side  
L-Left  
R-Right



DIMENSIONS ARE IN INCHES

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MODEL NUMBER	L INCH (MM)	WATTS	MAX SOUND A LEVEL Lp (dBA)	MAX SOUND POWER LEVEL Lp (dBA)	FAN SPEED	VOLTS (0-10)	AIRFLOW CFM	140/120/68 °F	
								HEATING BTU/h	FLOWRATE UsGPM
VKN-9/25/950	37.5(900)	18	40	48	Max	10V	100	4859	0.49
			28	36	Med	5V	75	3840	0.38
			21	29	Min	3V	35	2738	0.27
VKN-9/25/1100	43.5(1100)	21	40	48	Max	10V	175	5705	0.57
			28	36	Med	5V	140	4508	0.45
			21	29	Min	3V	60	3216	0.32
VKN-9/25/1250	49 (1250)	26.5	40	48	Max	10V	255	7318	0.73
			28	36	Med	5V	205	5783	0.58
			21	29	Min	3V	95	4123	0.41
VKN-9/25/1450	57(1450)	31	40	48	Max	10V	345	8474	0.85
			28	36	Med	5V	275	6694	0.67
			21	29	Min	3V	120	4774	0.48
VKN-9/25/1650	65(1650)	36	38	46	Max	10V	425	9701	0.97
			34	26	Med	5V	345	7665	0.77
			21	29	Min	3V	155	5466	0.55
VKN-9/25/1800	71(1800)	39	38	46	Max	10V	500	11410	1.14
			34	26	Med	5V	400	9012	0.90
			21	29	Min	3V	200	6428	0.64
VKN-9/25/2000	78.5(2000)	45	43	51	Max	10V	576	12160	1.22
			29	37	Med	5V	495	9609	0.96
			21	29	Min	3V	251	6850	0.69
VKN-9/25//2150	84.5 (2150)	49	43	51	Max	10V	518	13404	1.34
			29	37	Med	5V	406	10591	1.06
			21	26	Min	3V	300	7553	0.76
VKN-9/25/2300	90.5 (2300)	53	43	51	Max	10V	518	14622	1.46
			29	37	Med	5V	406	11553	1.16
			21	29	Min	3V	300	8238	0.82
VKN-9/25/2500	98.5 (2500)	58	43	51	Max	10V	518	15791	1.58
			29	37	Med	5V	406	12477	1.25
			21	29	Min	3V	300	8896	0.89
VKN-9/25/2750	108.5 (2750)	63	41	49	Max	10V	518	17387	1.74
			29	37	Med	5V	406	13738	1.37
			21	29	Min	3V	300	9797	0.98

- Standard heating output compliant to EN-16430 for room temperature of 68°F
- Sound power levels according to ISO-3745 standard, sound pressure level measured at distance of 6.5ft to the unit, in a 3531.5ft<sup>3</sup> vol

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# VKN - 3 INCHES HEIGHT - 14 INCHES WIDTH

ORDER CODE: VKN-7.5/35/Lk-14

DIMENSIONS	UNIT [INCHES]
Trench Height	3
Trench Width	13.7
Grille Width (Bk)	14.7
Trench Length (Lk)	37.5 - 108.5

CONNECTIONS	TYPE
Connection Threads	IT 0.75" one-sided
Side Connection to be Chosen	Standard Right – R Optional Left – L
Fan from the Window Side	Standard

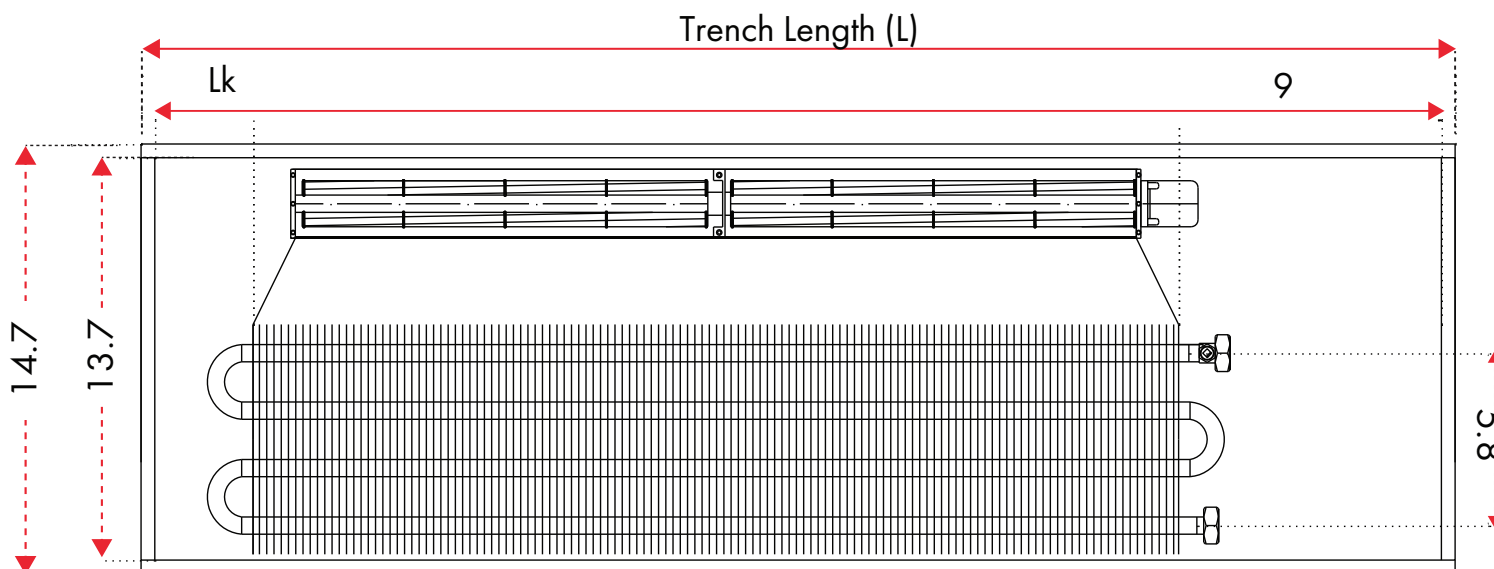
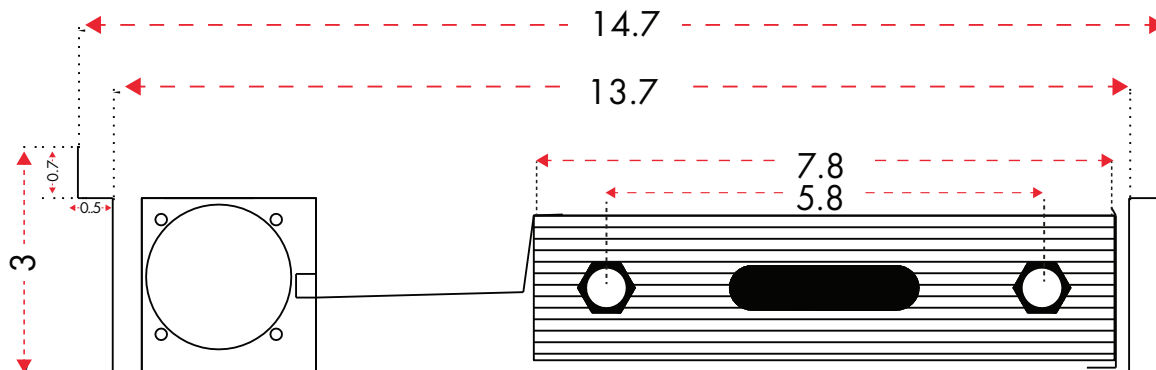
ACCESSORIES	TYPE
Grille H=0.7"	Roll-up/linear/modular
Aluminum Frame	L or F
Assembly Cover	On Request

## EXAMPLE OF ORDER CODE

**VKN-7.5/35/Lk (L/R)**

Trench Length  
Lk[in]

Connection Side  
L-Left  
R-Right



DIMENSIONS ARE IN INCHES

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MODEL NUMBER	L INCH (MM)	WATTS	MAX SOUND A LEVEL Lp (dBA)	MAX SOUND POWER LEVEL Lp (dBA)	FAN SPEED	VOLTS (0-10)	AIRFLOW CFM	140/120/68 °F	
								HEATING BTU/h	FLOWRATE UsGPM
VKN-7.5/35/950	37.5(900)	6	40	48	Max	10V	100	3707	0.37
			28	36	Med	5V	75	2332	0.23
			21	29	Min	3V	35	1470	<0.15
VKN-7.5/35/1100	43.5(1100)	7	40	48	Max	10V	175	4348	0.43
			28	36	Med	5V	140	2738	0.27
			21	29	Min	3V	60	1725	0.17
VKN-7.5/35/1250	49 (1250)	9.5	40	48	Max	10V	255	5579	0.56
			28	36	Med	5V	205	3516	0.35
			21	29	Min	3V	95	2210	0.22
VKN-7.5/35/1450	57(1450)	10.5	40	48	Max	10V	345	6462	0.65
			28	36	Med	5V	275	4068	0.41
			21	29	Min	3V	120	2561	0.26
VKN-7.5/35/1650	65(1650)	12	38	46	Max	10V	425	7399	0.74
			34	26	Med	5V	345	4658	0.47
			21	29	Min	3V	155	2933	0.29
VKN-7.5/35/1800	71(1800)	13	38	46	Max	10V	500	8699	0.87
			34	26	Med	5V	400	5480	0.55
			21	29	Min	3V	200	3447	0.34
VKN-7.5/35/2000	78.5(2000)	15.2	43	51	Max	10V	576	9272	0.93
			29	37	Med	5V	495	5841	0.58
			21	29	Min	3V	251	3676	0.37
VKN-7.5/35/2150	84.5 (2150)	16.5	43	51	Max	10V	518	10226	1.02
			29	37	Med	5V	406	6438	0.64
			21	26	Min	3V	300	4054	0.41
VKN-7.5/35/2300	90.5 (2300)	18.5	43	51	Max	10V	518	11150	1.12
			29	37	Med	5V	406	7021	0.70
			21	29	Min	3V	300	4419	0.44
VKN-7.5/35/2500	98.5 (2500)	19.5	43	51	Max	10V	518	12040	1.20
			29	37	Med	5V	406	7580	0.76
			21	29	Min	3V	300	4770	0.48
VKN-7.5/35/2750	108.5 (2750)	21.5	41	49	Max	10V	518	13261	1.33
			29	37	Med	5V	406	8351	0.84
			21	29	Min	3V	300	5255	0.53

- Standard heating output compliant to EN-16430 for room temperature of 68 °F
- Sound power levels according to ISO-3745 standard, sound pressure level measured at distance of 6.5ft to the unit, in a 3531.5ft<sup>3</sup> vol

# VKN - 3.5 INCHES HEIGHT - 14 INCHES WIDTH

**ORDER CODE: VKN-9/35/Lk-14**

DIMENSIONS	UNIT [INCHES]
Trench Height	3.5
Trench Width	13.7
Grille Width (Bk)	14.7
Trench Length (Lk)	37.5 - 108.5

CONNECTIONS	TYPE
Connection Threads	IT 0.75" one-sided
Side Connection to be Chosen	Standard Right – R Optional Left – L
Fan from the Window Side	Standard

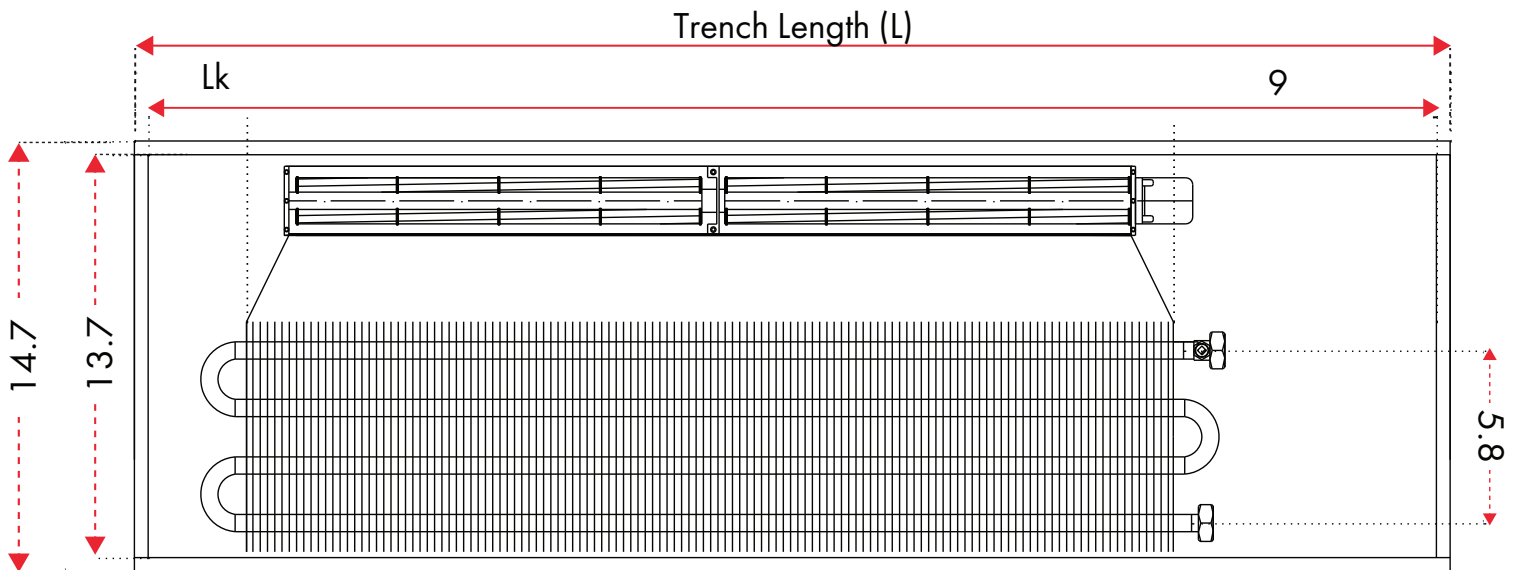
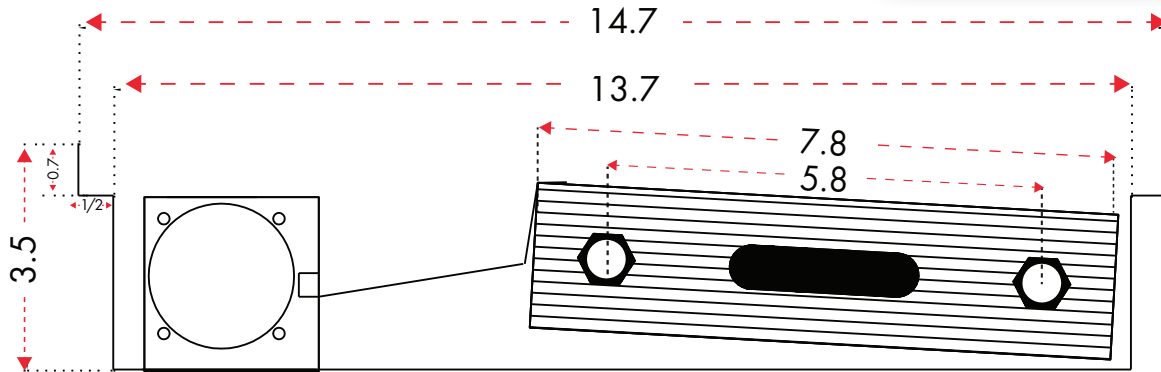
ACCESSORIES	TYPE
Grille H=3/4 inch	Roll-up/linear/ modular
Aluminum Frame	L or F
Assembly Cover	On Request

## EXAMPLE OF ORDER CODE

**VKN-9/35/Lk (L/R)**

Trench Length  
Lk[in]

Connection Side  
L-Left  
R-Right



DIMENSIONS ARE IN INCHES

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								140/120/68 °F	
MODEL NUMBER	L INCH (MM)	WATTS	MAX SOUND A LEVEL Lp (dBA)	MAX SOUND POWER LEVEL Lp (dBA)	FAN SPEED	VOLTS (0-10)	AIRFLOW CFM	HEATING BTU/h	FLOWRATE UsGPM
VKN-9/35/950	37.5(900)	18	40	48	Max	10V	100	6908	0.69
			28	36	Med	5V	75	5186	0.52
			21	29	Min	3V	35	3611	0.36
VKN-9/35/1100	43.5(1100)	21	40	48	Max	10V	175	8109	0.81
			28	36	Med	5V	140	6090	0.61
			21	29	Min	3V	60	4242	0.42
VKN-9/35/1250	49 (1250)	26.5	40	48	Max	10V	255	10407	1.04
			28	36	Med	5V	205	7815	0.78
			21	29	Min	3V	95	6090	0.61
VKN-9/35/1450	57(1450)	31	40	48	Max	10V	345	12044	1.20
			28	36	Med	5V	275	9046	0.90
			21	29	Min	3V	120	5439	0.54
VKN-9/35/1650	65(1650)	36	38	46	Max	10V	425	13793	1.38
			34	26	Med	5V	345	10359	1.04
			21	29	Min	3V	155	6298	0.63
VKN-9/35/1800	71(1800)	39	38	46	Max	10V	500	16217	1.62
			34	26	Med	5V	400	12180	1.22
			21	29	Min	3V	200	7212	0.72
VKN-9/35/2000	78.5(2000)	45	43	51	Max	10V	576	17288	1.73
			29	37	Med	5V	495	12985	1.30
			21	29	Min	3V	251	8480	0.85
VKN-9/35/2150	84.5 (2150)	49	43	51	Max	10V	518	19061	1.91
			29	37	Med	5V	406	14315	1.43
			21	26	Min	3V	300	9040	0.90
VKN-9/35/2300	90.5 (2300)	53	43	51	Max	10V	518	20787	2.08
			29	37	Med	5V	406	15611	1.56
			21	29	Min	3V	300	9964	1.00
VKN-9/35/2500	98.5 (2500)	58	43	51	Max	10V	518	22447	2.24
			29	37	Med	5V	406	16859	1.69
			21	29	Min	3V	300	10867	1.09
VKN-9/35/2750	108.5 (2750)	63	41	49	Max	10V	518	24722	2.47
			29	37	Med	5V	406	18567	1.86
			21	29	Min	3V	300	11737	1.17

- Standard heating output compliant to EN-16430 for room temperature of 68°F
- Sound power levels according to ISO-3745 standard, sound pressure level measured at distance of 6.5ft to the unit, in a 3531.5ft<sup>3</sup> vol

# CONTROL DEVICES FOR VKN FAN-ASSISTED TRENCH HEATERS

NAME	DESCRIPTION	
Straight thermostatic valve type Siemens VDN 215	Valve diameter 15 DN	
Angular thermostatic valve type Siemens VEN 215	Valve diameter 15 DN	
Straight return valve type Siemens ADN 15	Valve diameter 15 DN	
Angular return valve type Siemens AEN 15	Valve diameter 15 DN	
Straight thermostatic valve type Schlösser 601200004	Valve diameter 15 DN	
Angular thermostatic valve type Schlösser 601200005	Valve diameter 15 DN	
Straight return valve type Schlösser 601300004	Valve diameter 15 DN	
Angular return valve type Schlösser 601300002	Valve diameter 15 DN	
Thermal servo-motor type Siemens STA 73 or STA 73/00	Supply voltage 24 V AC/DC, 2-position control. STA73 with 1 m connection cable, STA73/00 – need a separate cable ASY23L...	
Cable – type Siemens ASY23L...	Connection cable for STA 73/00 control mode 0...10 V, length of 6.6 ft, 9.8 ft and 16.4 ft, 2-position control	
Verano controller type VER-24B (White)	The control mode 0 ... 10 V or ON / OFF (valve 24 V). Ability to work in heating or cooling mode. Operating modes: comfort, economical and security.	
Verano controller type VER-24C (Black)	The control mode 0 ... 10 V or ON / OFF (valve 24 V). Ability to work in heating or cooling mode. Operating modes: comfort, economical and security.	
Room temperature controller type Siemens RDG160T	The control mode 0 ... 10 V or ON / OFF (valve 24 V). Ability to work in heating or cooling mode. Operating modes: comfort, economical and security.	
Rail Power Supply Z030-24VDC	Input voltage 100-240 V AC, Input frequency 50-60Hz, Output voltage 24 V DC, Max output current 1.25A	
Rail Power Supply Z060-24VDC	Input voltage 100-240 V AC, Input frequency 50-60Hz, Output voltage 24 V DC, Max output current 2.5A	
Rail Power Supply Z100-24VDC	Input voltage 100-240 V AC, Input frequency 50-60Hz, Output voltage 24 V DC, Max output current 3.8A	
Rail Power Supply Z120-24VDC	Input voltage 100-240 V AC, Input frequency 50-60Hz, Output voltage 24 V DC, Max output current 5A	
Rail Power Supply Z240-24VDC	Input voltage 100-240V AC, Input frequency 50-60Hz, Output voltage 24V DC, Max output current 10A	
Rail Power Supply Z480-24VDC	Input voltage 100-240 V AC, Input frequency 50-60Hz, Output voltage 24 V DC, Max output current 20A	

The manufacturer reserves the right to make changes to the design, colour and specifications of the product shown. All images are for illustrative purposes only and some features such as grilles are optional accessories and not considered as standard equipment.

# CONTROLLING THE VKN HEATER

## SELECTING POWER SUPPLY

1. Maximum power of the electric fan located in each trench unity may be found by using the table included in the catalogue. Selecting power lower than the maximum will result in the fan being switched off at higher fan speeds, and this may result in damage to the power supply unit or fan motor. The maximum energy demand and current can be found in the table for "Boost mode."

2. Using the technical sheet of the selected actuator read its maximum electric power—e.g. 4.8 W/0.2 A for the VERSST24 actuator.

3. Using the technical sheet of the selected controller, read its maximum electric power—e.g. 1.3 W/0.06A for VER-24 and VER-24S controllers.

4. Add up all maximum powers and loads for all devices used (including multiple use of devices).

5. After calculations are complete, select the smallest power supply unit that satisfies the total power demand.

## EXAMPLE

3 heaters were selected for a room according to its heating power demand:

- 1 x VKN-6.5/17/1250
- 2 x VKN-6.5/17/1650

Additionally there are 3 VERSST24 thermal actuators and 1 VER-24 controller in the system.

Using the electric data for VKN heaters included on page 9 and the technical sheets of control devices we read.

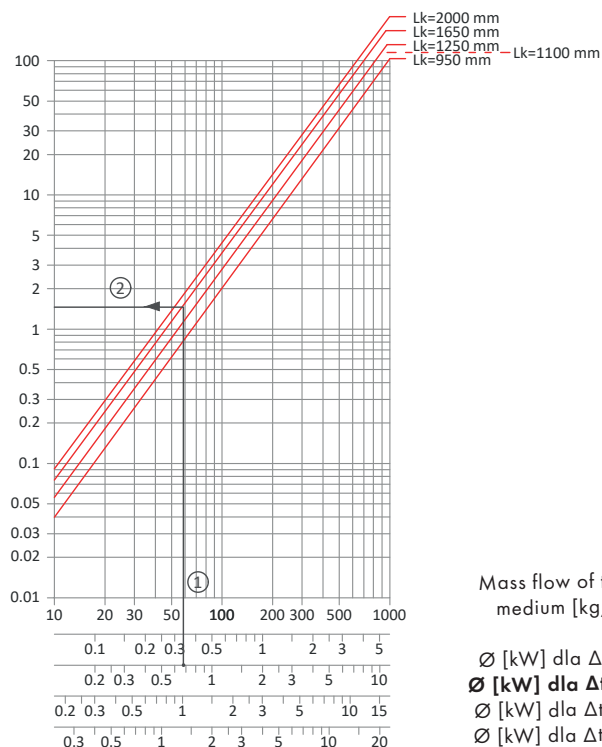
DEVICES TYPE	MAXIMUM ELECTRIC POWER	MAXIMUM CURRENT
1 x VKN-6.5/17/1250 fan heater	1 x 9.2 W	1 x 0.38 A
2 x VKN-6.5/17/1650 fan heater	2 x 12 W	2 x 0.5 A
VERSST24 thermal actuator	3 X 4.8 W	3 x 0.2 A
VER-24 controller	1 X 1.3 W	1 x 0.06 A
<b>TOTAL</b>	<b>48.9 W</b>	<b>2.04 A</b>

## PRESSURE LOSSES

Based on heater selection mode, as presented on page 40 we selected the **VKN-6.5/17/1650** heater with a power of 682 W at fan voltage of 3.9 V. The temperature the cooling medium is cooled by is  $\Delta t=50^{\circ}\text{F}$

1. Using the axis for  $50^{\circ}\text{F}$  cooled medium we draw a vertical line to the heating power of 0.68 kW till it crosses the transverse line representing heater length of  $L_k=64.9''$ .

2. Draw a horizontal line and read the pressure loss value of  $\Delta p=1.55 \text{ kPa}$ .



# INSTALLING AND USING VKN FAN HEATERS

Prior to start of assembly always make sure to prepare a trench in the floor with dimensions exceeding the dimensions of the heater by some 0.5" in every direction. Plan the depth of the trench in such a way, that the surface of grille matches the expected floor finish level.

Leveling the trays of fan-assisted trench heaters is achieved with use of leveling legs. The legs shall rest on the construction layer of the floor. The next step is to assemble the anchoring screws and anchors that fix the heater to the concrete.

Fan-assisted trench heater is installed in such a way that the heat exchanger faces the division and the fan faces the heated room. The fan assisted heaters are not universal—always remember to quote the correct connection side when ordering.

For the duration of construction it is recommended to cover the tray with assembly cover that protects the elements of the heater from mechanical damage and dust.

Prior to pouring concrete that the edge of the tray will rest on make sure that all heater water and control connections were installed.

Electric and installation ducts may be connected to the tray from it longer or shorter side. After hydraulic and electric connections are complete. Test the correctness of control system and remove all dirt from tray. The poured concrete that the edge of the tray will rest on should be at least 1.9" thick.

During assembly of trench heater always remember the assembly spreaders that are included with the heater and prevent the tray and heater edge from deformation. Addition of dilatation mat on the side of heater tray allows to lower the contact surface of concrete and heater tray, thus serving as additional acoustic insulation of the heater.

The border L and F-type frames are accessories that allow the finishing of the tray borders during finishing works carried out by licensed professionals.

The VKN trench heater has an optional adjustable edge, which allows for levelling between the expected and final height without the need to chisel the floor.

Trench heaters used in heating season should not be covered by carpets, furniture or curtains. The grilles can resist pressure and abrasion from low intensity pedestrian traffic. Avoid exercising excessive pressure on the grille bars, e.g. by placing room furnishings on them.

Due to the possible influence of dirt we recommend the periodic cleaning of heater tray.

**PLEASE REFER TO INSTALLATION, OPERATION AND MAINTENANCE MANUAL FOR DETAILED INSTRUCTIONS**

# VKN HEATER WIRING DIAGRAM

The fan-assisted trench heaters are controlled automatically with use of room thermostat compatible with an ECM Fan. The thermostat monitors the room temperature and maintains a pre-set level. The high precision adjustment is the result of the simultaneous control of both the 2-position actuator & ECM fan motor.

The following are required for the correct operation of trench heater with fan: Thermostat, or temperature controller installed on thermostatic valve and 24 V or BMS System (by others), DC power supply unit selected according to the electrical requirements of installed heaters.

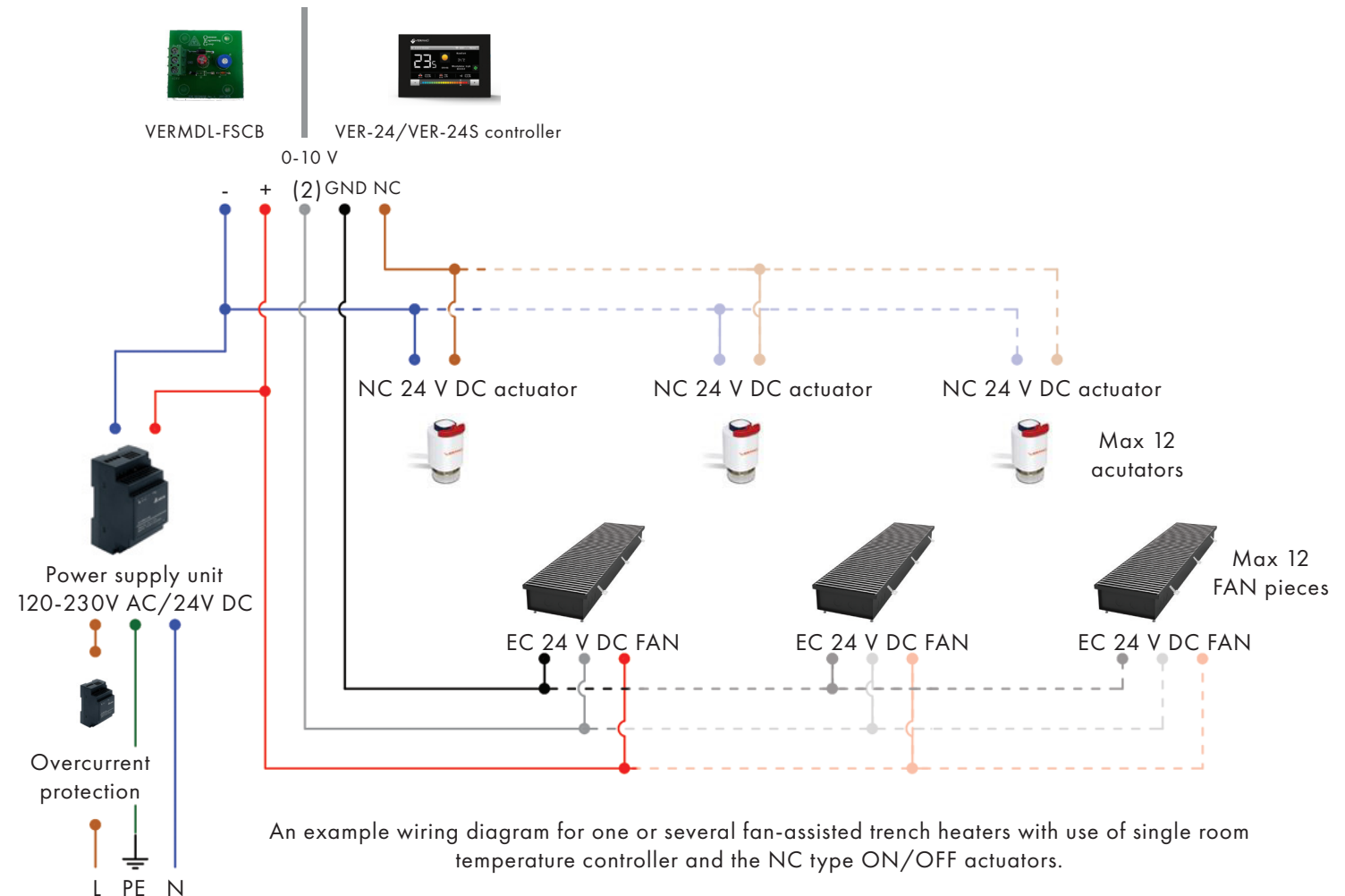
The room Thermostat, as per the diagram below, is connected to the heater fan and the actuator installed on the thermostatic valve. Due to the built-in temperature sensor the room thermostat should not be covered with furniture or other interior design elements.

It is also possible to connect several fan-assisted heaters to a single power source. The heating zones should be correctly designated, so that the number of fan motors does not exceed 12.

The power supply unit should be protected with appropriate over-current protection that will also allow to switch the power off during service and maintenance.

## WARNING

Installation should only be performed by MDL Verano approved personnel, in accordance with local codes and standards. All electrical wiring must follow MDL Verano instructions and deviations must be approved by the factory before installation. Units are designed for operation with 24V DC power supply only. Never connect directly to mains 120-230 V AC power grid.



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## MODULAR VKN (MVKN5 SERIES)

For rooms where trench heaters are not feasible, the modular fan-assisted MVKN5 heater is an ideal solution for floor or wall mounted installation. The heater can be combined into continuous sections of the appropriate length of the heating system. The heater casing is available in any RAL palette, and the top of the heater can be finished with a standard punched metal grille or aluminum grille.

Please contact MDL Solutions for more information on MVKN5





# VERANO<sup>®</sup>

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