REZNOR®

UDSA - UDSBD

Gas fired unit heaters

ErP 2018

NORTEK™
GLOBAL HVAC

REZNOR®

UDSA with axial fan

Reznor V3 unit heaters are one of the most technically advanced products available on the market today. Incorporating a radical horizontal heat exchanger design and single burner, V3 units are compact and lightweight. They deliver the highest possible standards of energy efficiency and performance.

The model with axial fan UDSA has firing rates from 11 to 100 kW in horizontal execution - 13 models - or vertical downflow - 10 models.
The model with centrifugal fan UDSBD is available in 9 sizes from 15 up to 65 kW.

V3 UDSA and UDSBD unit heaters are easy to install. They are suitable for indoors installation in industrial and commercial premises, retail, sports and leisure, warehouses and many other applications.

Increased comfort and sustainability

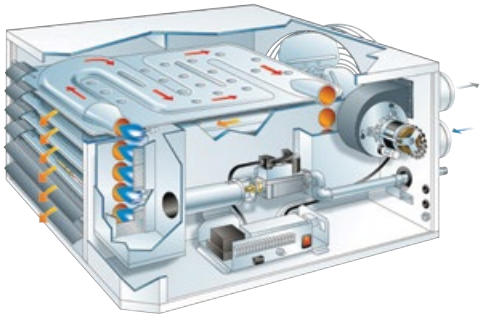
This fourth generation of the UDSA has new, ErP-compliant fans.

A modulating burner is now fitted as standard on every model, requiring a 0-10V DC signal. Thanks to the modulating burner, ErP seasonal efficiency is increased, making the V3-range compliant to the requirements of ErP Lot 21 (warm air) which comes into force in 2018.

Another development is the GA11 thermostat, allowing user friendly control of up to 9 unit heaters.

ready for ErP

ErP Lot 21 - 2018
seasonal efficiency
73-77%*
Complies to NOx



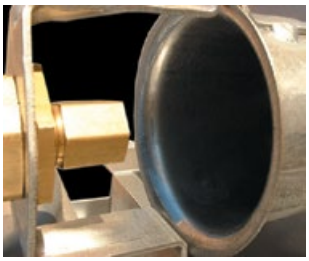
TECHNICAL DATA UDSA

Model		011	015	020	025	030	035
Gas category							
Comb.air and venting; type B & C-installations[1]							
Heat input (Hs)	kW	13,2	17,6	22,0	30,8	35,2	41,8
Heat input (Hi)	kW	11,9	15,9	19,8	27,8	31,7	37,7
Heat output	kW	11,0	14,6	18,2	25,5	29,2	34,7
Thermal efficiency (Hi)	%	92	92	92	92	92	92
Gas consumption rate							
natural gas G20	m³/h	1,26	1,68	2,10	2,94	3,36	3,99
natural gas G25	m³/h	1,46	1,95	2,44	3,42	3,90	4,64
propane G31	kg/h	0,93	1,24	1,55	2,16	2,47	2,94
Gas connection size (not Ø gas supply line)							
Temperature rise ΔT (±1)[6]	K	32	32	32	32	32	29
Airflow (15°C)	m³/h	1020	1360	1700	2385	2725	3510
Motor speed	rpm	1390	1450	1450	930	1250	920
Vent & combustion air connection collars	Ømm	80	80	80	100	100	100
recommended max. horizontal mounting height[2]	m	3	3	3	4	4	4
Horizontal throw[3]	m	10	13	16	20	25	25
Sound pressure level[4]	dB(A)	46	47	48	43	49	44
Sound pressure level[5]	dB(A)	39	40	41	36	42	37
Electrical service class (protection class IP 20)							
Maximum total electrical rating	W	121	126	126	273	270	290
Weight (net)	kg	33	38	40	54	57	86

*ErP seasonal efficiency according to ErP Lot 21 specifications, coming into force 1 January 2018. Between 73 and 77% according to model.

Energy saving

- 4-pass heat exchanger, achieves over 92% thermal efficiency.
- Reduced NOx emissions.
- An improved airflow and a new louvre design give longer air throws and significantly reduce stratification within the building. Consequently, the units are particularely suitable for well insulated buildings. If necessary, destratification fans can be installed.
- Aerodynamic heat exchanger profile enables the UDSA to increase airflow up to 40% with a 30% reduction on electrical consumption.
- Standard modulating burner



Maintenance is very simple thanks to the use of a single gas injector for all models

Easy installation and maintenance

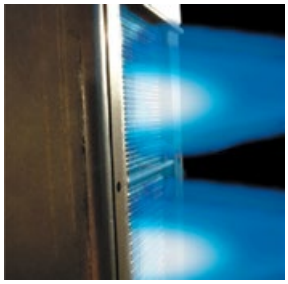
- Up to 25% lighter than similar models and easy to install.
- Balanced flue wall terminal provides both flue outlet and combustion air inlet, thereby reducing installation time.
- All connections - gas and electricity - are accessible at one side of the heater.

Extended operational life

- The titanium stabilised aluminised steel heat exchanger is particulary strong and durable providing additional temperature resistance. Its weld free construction ensures long life.
- The patented self-aligning burner with single orifice eliminates possible flame impingment and premature heat exchanger failure.

Application versatility

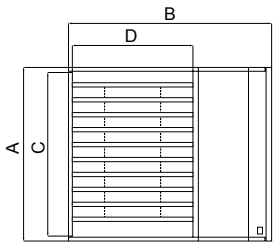
- Both horizontal and vertical down flow units are available.
- Fourteen different heat outputs from 8 to 100 kW.
- The smallest unit is only 310 mm high, making it ideal for confined spaces.
- Units may be suspended or base mounted on a suitable non-combustible support.



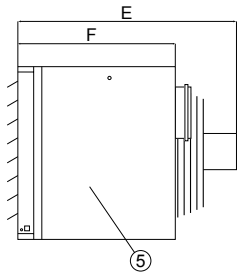
043	050	055	064	073	085	100
B22, C12, C32, C42, C52, C62, C82						
50,8	58,6	66,0	77,7	88,0	102,7	117,3
45,8	52,8	59,5	70,0	79,3	92,5	105,7
42,1	48,6	54,7	64,4	73,0	85,1	97,0
92	92	92	92	92	92	92
4,85	5,59	6,30	7,41	8,39	9,79	11,18
5,64	6,50	7,32	8,62	9,76	11,38	13,00
3,57	4,12	4,64	5,46	6,18	7,21	8,24
Rc 3/4						
28	28	28	28	28	28	28
4535	5180	5830	6810	7770	9065	10360
910	1360	940	930	900	890	1050
100	100	130	130	130	130	130
4	4	4	4	4	4	4
28	32	35	33	41	41	39
45	56	51	52	54	55	60
38	49	44	45	47	48	53
290	500	410	410	770	770	960
99	102	114	118	143	160	179

Model UDSA dimensions (mm ± 2)																
Model	A	B	C	D	E	F	G	H	J	K	L	M	N	P	Q	R
008-011	307	700	267	404	696	546	131	191	129	67	85	413	16	98	350	120
015-020	383	700	343	404	723	546	200	191	139	122	86	413	16	98	350	120
025-030	586	700	546	404	771	546	368	191	222	122	121	413	16	98	350	140
035-043-050	510	970	456	601	1033	897	371	194	126	158	121	622	33	149	600	140
055-064	663	970	609	601	1052	897	354	206	150	165	204	622	33	149	600	225
073	866	1040	812	651	1036	897	562	212	299	185	204	672	33	149	600	225
085	866	1040	812	651	1139	897	562	212	299	185	204	672	33	149	600	225
100	866	1040	812	651	1097	897	562	212	299	185	204	672	33	149	600	225

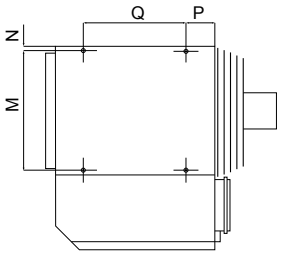
1. Combustion air inlet
2. Flue connection
3. Gas connection
4. Electrical connections
5. Service panel



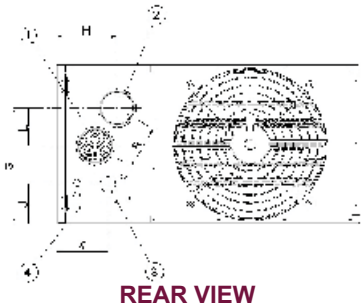
FRONT VIEW



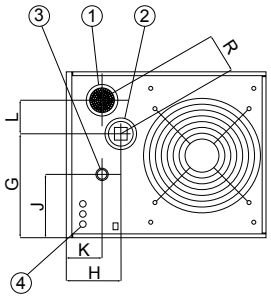
SIDE VIEW



TOP VIEW

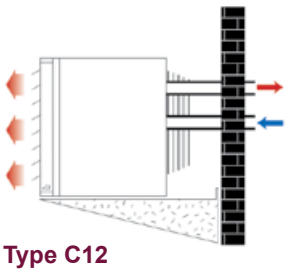


REAR VIEW
(models 035, 043, 050)

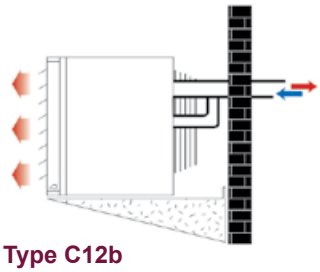


REAR VIEW
(all models except 035, 043, 050)

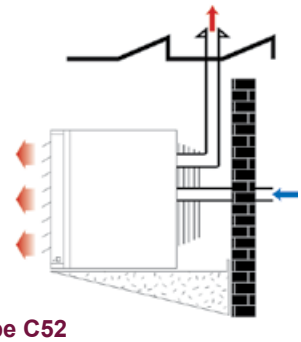
BALANCED FLUE WALL AND ROOF TERMINAL



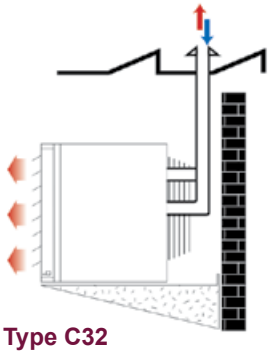
Type C12



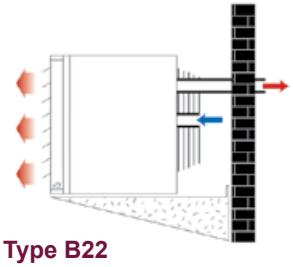
Type C12b



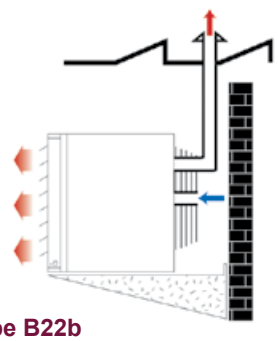
Type C52



Type C32



Type B22



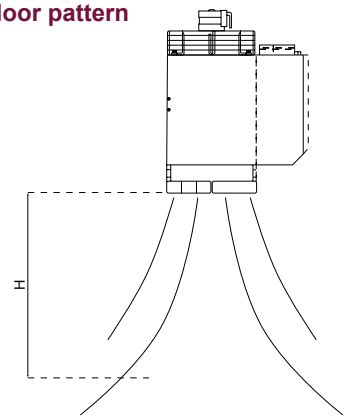
Type B22b

C-type: the allowed length between the unit heater and the flue terminal amounts to 9m, a 90° bend offering an equivalent resistance of 1.5 m and a 45° bend -0.75 m

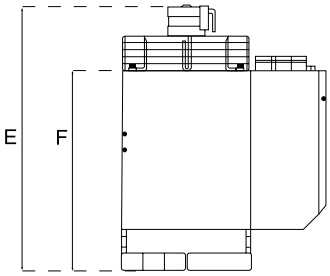
To ensure that heat loss through the roof is kept to a minimum and to avoid stratification, it is possible to suspend a vertical UDSA model.
This unit can operate dually as a heater and as a destratification unit.
The option “vertical orientation” (option number 205.8) can only be specified for UDSA 015, 025, 035, 043, 050, 055, 064, 073, 085 & 100.

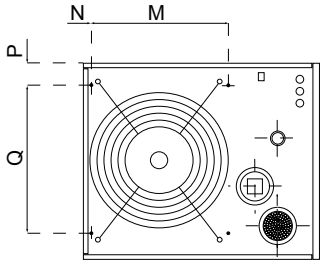
All vertical UDSA models are fitted with a four-way outlet grill (no louvres). The vertical UDSA can function as a destratification unit by placing a destratification thermostat (option 904). This combination will allow the vertical UDSA to ventilate and recirculate warm air towards the floor, which results in energy savings and climate comfort.

Floor pattern



Diffuser grill louvre setting





MOUNTING DATA

Maximum mounting height from floor H (m)[1]			
Model	Air louvres neutral	Air louvres 30°	Air louvres 45°
015	5,0	4,5	4,0
025	6,0	5,0	4,5
035	7,0	6,0	5,5
043	9,0	7,5	7,0
050	10,0	8,5	7,5
055	9,0	7,5	7,0
064	10,5	8,5	8,0
073	10,0	8,0	7,5
085	11,0	9,0	8,5
100	12,0	10,0	9,0

1. max. mounting heights are defined at a uniform room temperature of 15°C and a temperature rise at nominal heat input

MODEL UDSA DIMENSIONS (mm ±2)						
Model	E	F	M	N	P	Q
015	864	686	413	16	67	250
025	918	686	413	16	68	450
035,043,050	1270	1037	623	35	55	400
055,064	1278	1037	623	35	82	500
073,085,100	1317	1057	673	35	183	500

for other dimensions: see table indicated as horizontal UDSA model

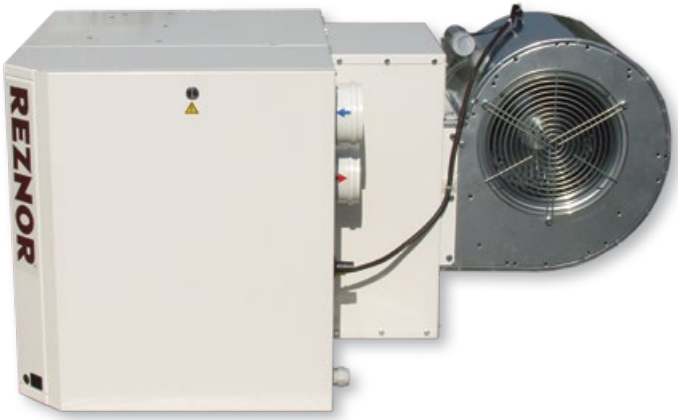
REZNOR®

UDSBD with centrifugal fan

Reznor's V3 model UDSBD is a gas fired unit heater with separated combustion and atmospheric burner. It is equipped with a direct drive centrifugal fan and can cope with external static pressures up to 150 Pa. The UDSBD also exists in a vertical execution for models 015, 025, 035, 043, 050, 055 and 064.

The UDSBD is designed for air recirculation and air distribution through ductwork, a plenum, a standard outlet grill, vertical louvres and downturn nozzles.

UDSBD units are ideal for heating open doorways with constant running fans or room temperature controlled space heating.



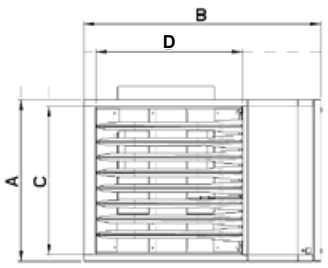
TECHNICAL DATA UDSBD

Model		015	020	025	030	035	043	050
Gas category		BE II_{2E+3+} / NL II_{2L3P}						
Comb.air and venting; type B & C-installations[1]		B22, C12, C32, C42, C52, C62, C82						
Heat input (Hs)	**kW**	17,6	22,0	30,8	35,2	42,2	50,8	58,6
Heat input (Hi)	**kW**	15,9	19,8	27,8	31,7	38,0	45,8	52,8
Heat output	**kW**	14,6	18,2	25,5	29,2	34,9	42,1	48,6
Thermal efficiency (Hi)	**%**	92	92	92	92	92	92	92
Gas consumption rate								
natural gas G20	**m^3/h**	1,68	2,10	2,94	3,36	4,02	4,85	5,59
natural gas G25	**m^3/h**	1,95	2,44	3,42	3,90	4,68	5,64	6,50
propane G31	**kg/h**	1,24	1,55	2,16	2,47	2,96	3,57	4,12
Gas connection size (not Ø gas supply line)		Rc 1/2				Rc 3/4		
Temperature rise ΔT (±1)[6]	**K**	20	23	27	25	25	31	29
Airflow (15°C)	**m^3/h**	2150	2350	2750	3360	4080	3900	4900
Motor speed	**rpm**	950	950	1430	1430	950	950	950
Standard low, mid or high speed		mid	high	low	mid	low	low	mid
recommended max. horizontal mounting height[2]	**m**	3,5	4	4,5	4,5	5,5	5,5	6
Horizontal throw[3]	**m**	18	23	26	26	32	34	38
Sound pressure level[4]	**dB(A)**	57	58	54	58	53	54	59
Sound pressure level[5]	**dB(A)**	50	52	47	51	46	47	52
Electrical service (protection class IP 20)		230/240V 1N ~ 50Hz						
Maximum total electrical rating	**W**	496	496	1662	1662	1700	1700	1700
Weight (net)	**kg**	50	53	71	74	125	131	131

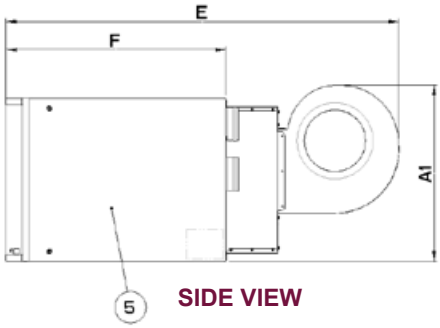
*ErP seasonal efficiency according to ErP Lot 21 specifications, coming into force 1 January 2018. Between 73 and 77% according to model.

Model UDSBD dimensions (mm ± 2)																	
Model	A	A1	B	C	D	E	F	G	H	J	K	L	M	N	P	Q	R
015,020	383	460	700	343	404	935	546	200	191	139	122	86	413	16	98	350	120
025, 030	586	590	700	546	404	1185	546	368	191	222	122	121	413	16	98	350	140
035,043,050	510	670	970	456	601	1610	897	371	194	126	165	121	623	33	149	600	140
055	663	685	970	609	601	1610	897	354	206	150	165	204	623	33	149	600	225
064	663	720	970	609	601	1610	897	354	206	150	165	204	623	33	149	600	225

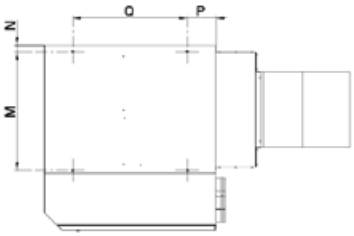
1. Combustion air inlet 2. Flue connection 3. Gas connection 4. Electrical connections 5. Service panel



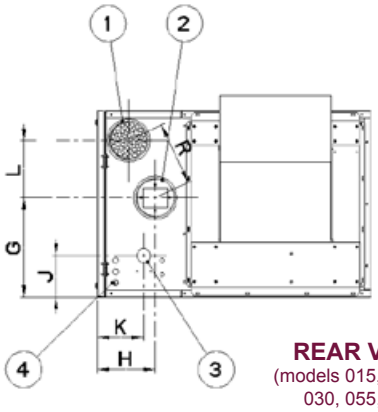
FRONT VIEW



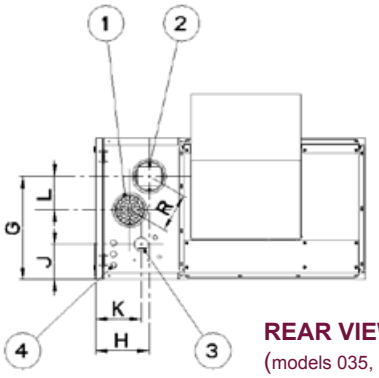
SIDE VIEW



TOP VIEW

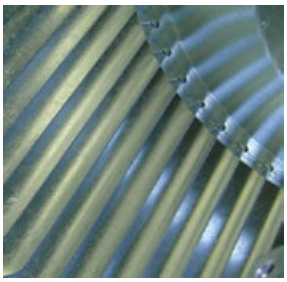


REAR VIEW
(models 015,020,025 030, 055,064)



REAR VIEW
(models 035, 043, 050)

	055	064	
	66,0	77,7	
	59,5	70	
	54,7	64,4	
	92	92	
	6,30	7,41	
	7,32	8,62	
	4,64	5,46	
	30	32	
	5300	5390	
	950	950	
	mid	high	
	6	6	
	38	38	
	57	60	
	50	53	
	1700	1700	
	148	153	



1) Gas appliance classifications for approved venting methods based on CEN report - CR1749:2001.

2) Height from floor to bottom surface of the heater. These are **recommendations only**. Positioning of unit heaters for proper performance depends on application. Operation is affected by other air moving equipment in the space, obstructions to the air flow, draughts and/or close proximity to doors or windows, etc. Care should be taken to **avoid mounting the heaters above these recommendations**, unless downturn nozzles options are used, as significant stratification may occur, resulting in poor floor coverage and higher energy through the roof structure.

3) Isothermal conditions - 20°C ambient air temperature, discharge louvres, zero deflection, v=0.5m/s

4) dB(A) values **5 metres** from the unit with reference circumstances **A=160m²** and **Q=2**

5) dB(A) values at **5 metres** from the unit in free field

6) Values measured with an external static pressure of 150 Pa.

Controls

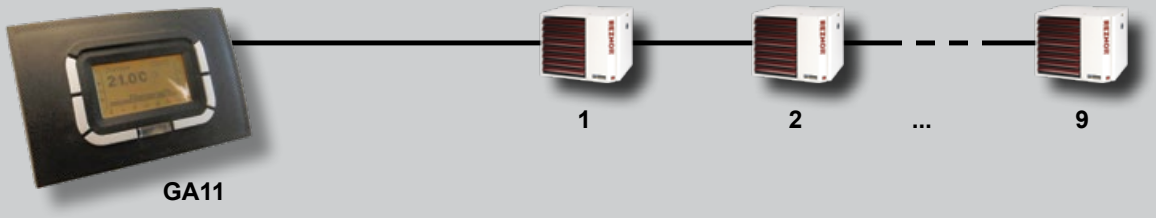
As buildings need to be run in the most economical and ecological way, so must the heating system. This is why we have selected these controls to help you maximize efficiency and control energy costs.

GA11	Option	
day/night/week, overtime, burner reset, error display on screen, two wire	952	
GA11 room sensor	953	

Functions	GA11
user friendly programming with day, night and week settings	√
multiple on/off periods per day	√
overtime period	√
burner reset	√
failure diagnostic on display	√
two-wire connection	√
password protection	√
frost protection	√
possibility to attach external sensor	√
ventilation switch	√
special option CFR	√
multilingual menus (English, French, Dutch)	√
graphic LCD dot-matrix	√
battery back-up	√
compatible with Brahma regulation	√
maximum number linked thermostats	9

Central control of multiple unit heaters: GA11

The GA11 allows controlling up to 9 unit heaters.



NORTEK GLOBAL HVAC
Nortek Global HVAC Belgium nv
J&M Sabbestraat 130/A000
B-8930 Menen
Belgium
Tel. +32 (0)56 52 95 11
Fax. +32 (0)56 52 95 33
info.reznor@nortek.com
www.reznor.eu

UDSA_UDSBD_EN_2017-12