

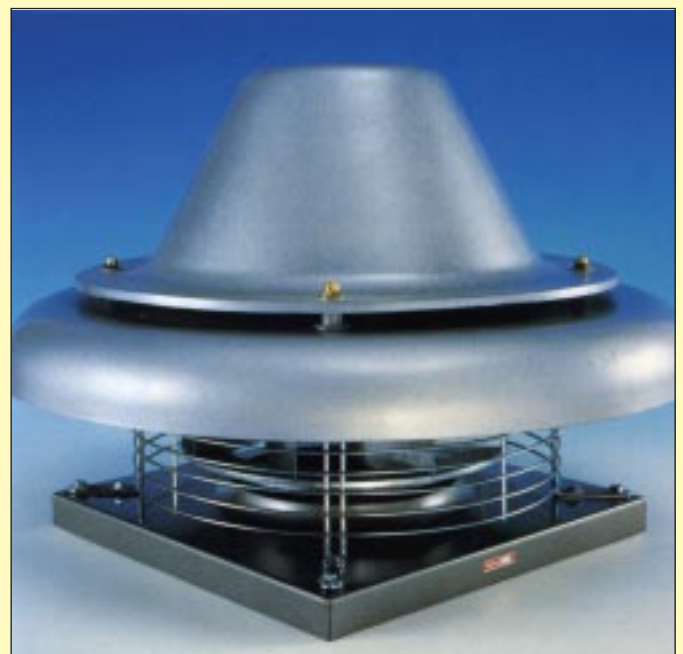
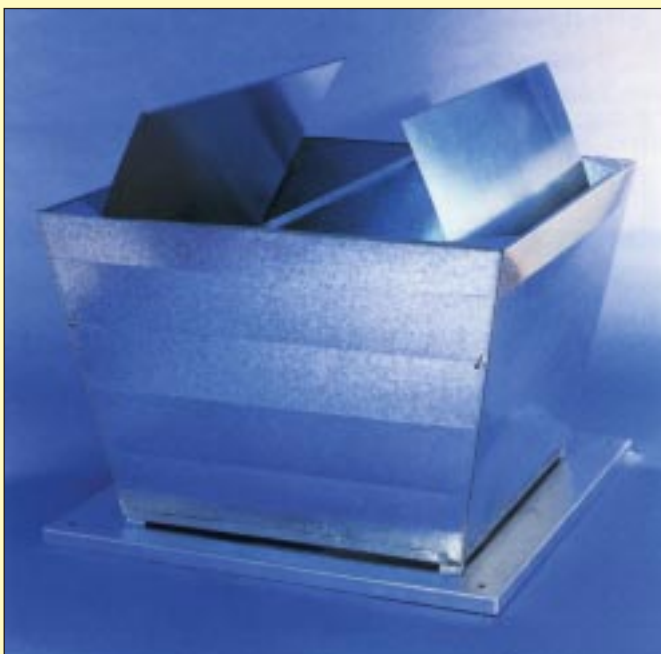
# "SMOKEX"<sup>®</sup>

## EMERGENCY SMOKE EXTRACT FANS

- ◆ Axial Fans
  - Long Cased
  - Wall Mounted
- ◆ Roof Mounted
  - Vertical Discharge (Axial)
  - Centrifugal



CI/SfB (57.7) (X)
Uniclass L7534



## "SMOKEX"<sup>®</sup> - A COMPLETE RANGE OF EMERGENCY SMOKE EXTRACT FANS

### General

Emergency smoke extract fans are installed in a wide variety of public and private buildings.

The **"Smokex"**<sup>®</sup> range of fans ensures that, in the event of a fire, smoke and toxic fumes are extracted leaving escape and access routes clear for evacuation.

There are four basic types of fan available in the Vectaire **"Smokex"**<sup>®</sup> range:

- "RVHT"** - Vertical Discharge Axial
- "LCAHT"** - Cased Axial
- "PAHT"** - Wall Mounted Axial
- "CRHHT"** - Centrifugal Roof

The extensive choice of size and performance means that there is a fan which will cope with every installation situation.



All the fans have been designed and manufactured to meet the current exacting and varying demands which are associated with providing public safety in the event of fire.

### Reliability

Vectaire's **"Smokex"**<sup>®</sup> fans are produced to the most rigorous standards in order to ensure the highest level of reliability and performance.

Backed by independent testing and approval, the **"Smokex"**<sup>®</sup> range gives the necessary confidence to ensure performance to specification in an emergency situation.

The fans are manufactured within the ISO9002 quality standard and comply with BS7346, Part 2. **"Smokex"**<sup>®</sup> axial fans have been tested and approved by the Warrington Fire Research Establishment, and are categorised into two rating classes:

- Class D: 300°C for 1 hour**
- Class E: 400°C for 2 hours**

The **"CRHHT"** centrifugal roof fans have been tested and approved by



CTICM (Centre Technique Industriel de la Construction Métallique - the French Government Approved Testing Authority).

### Motors

All the motors for the axial fans have been chosen to withstand the heat and smoke generated during a fire, according to the classifications shown above.

A rugged cast iron casing and high temperature (Class H) winding insulation allows the fans to be used in temperatures up to 400°C for 2 hours.

High quality caged bearings and dynamic balancing ensure smooth and reliable operation.

### Flexibility

Three-phase versions of the **"Smokex"**<sup>®</sup> fans are available with the option of a two speed motor. This enables them to be used as conventional continuous running fans at the lower speed, with the facility of being switched to the maximum speed for emergency smoke extraction.

Explosion proof (E Ex d) rated versions are also available for installation into hazardous locations.

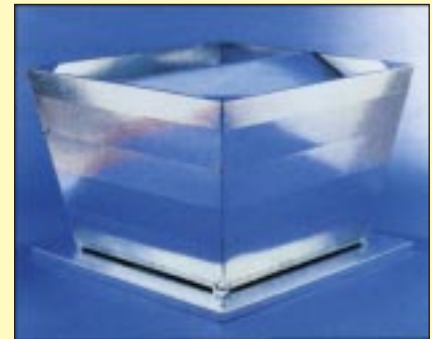
**"RVHT"**, **"LCAHT"** and **"PAHT"** axial fans are available with three phase motors only, and the **"CRHHT"** centrifugal fan is available in single or three phase versions.



### Impellers

The impellers on the axial fans (**"RVHT"**, **"LCAHT"** and **"PAHT"**) are constructed of die-cast aluminium on an aluminium alloy hub. The aerofoil section blades have a fully adjustable pitch. With either three, six or nine blades, each impeller can be accurately selected to provide the precise performance required.

The **"CRHHT"** is fitted with a backward bladed impeller in galvanised steel, which has been dynamically balanced to ensure that it operates at the correct performance and pressure.



### Construction

#### **"RVHT"** - Vertical Discharge Axial Fans

- robust steel casing.
- fans and base in resilient epoxy paint finish.
- galvanised steel base and funnel.
- weatherproof shutters in galvanised steel.

#### **"LCAHT"** - Cased Axial Fans

- robust steel casing.
- with resilient epoxy paint finish.

#### **"PAHT"** - Wall Mounted Axial Fans

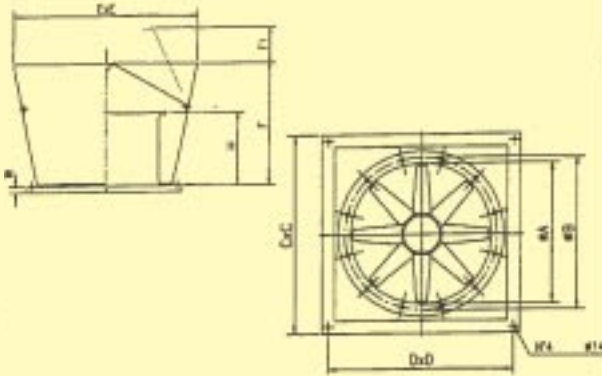
- robust steel casing.
- with resilient epoxy paint finish.
- wall plate in steel with resilient epoxy paint finish.

#### **"CRHHT"** - Centrifugal Roof Fans

- lower frame in galvanised sheet steel.
- protection guard in galvanised steel rod.
- cooling fan on motor shaft.
- double cover (for effective motor cooling) in polyester glass-fibre.
- durable weather resistant glass-fibre cowl.

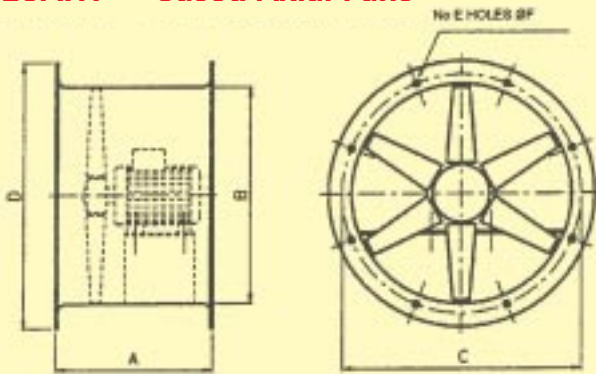
# "SMOKEX"<sup>®</sup> - TECHNICAL DATA - AXIAL FANS

## "RVHT" - Vertical Discharge Axial Fans



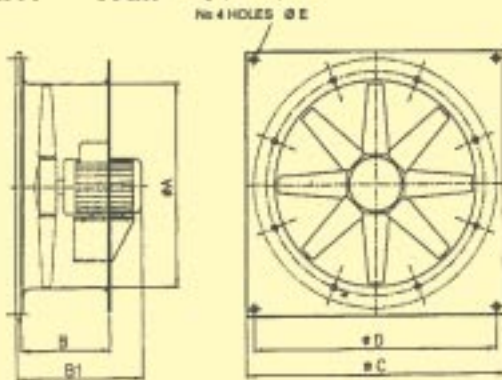
Model	Fan Size		Dimensions (mm)									Airflow		Sound
	ins	cm	ØA	H	ØB	CxC	DxD	ExE	F	F1	W	m <sup>3</sup> /sec	c.f.m.	dbA
RVHT404T	16	40	406	350	450	650	600	940	600	150	38	1.3	2750	62
RVHT454T	18	45	456	350	500	650	600	940	600	150	38	1.8	3810	65
RVHT504T	20	50	508	450	560	760	710	1000	690	200	38	2.5	5300	69
RVHT564T	22	56	568	450	620	760	710	1000	690	200	38	3.5	7410	72
RVHT634T	25	63	640	500	690	930	870	1150	750	220	38	5.4	11500	75
RVHT714T	28	71	710	500	770	930	870	1150	750	220	38	7.3	15470	84
RVHT804T	32	80	810	600	860	1100	1030	1300	900	250	38	10.8	22880	85
RVHT904T	36	90	910	750	970	1200	1120	1470	1100	280	50	15.6	33050	89
RVHT1004T	40	100	1010	750	1070	1300	1220	1470	1100	320	50	22.4	47460	90

## "LCAHT" - Cased Axial Fans



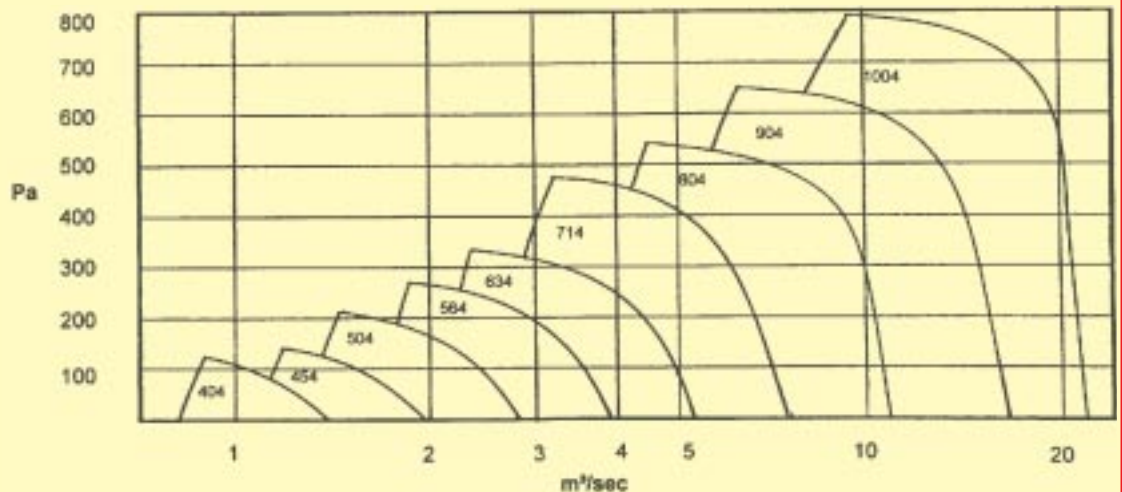
Model	Fan Size		Dimensions (mm)							Airflow		Sound
	ins	cm	A	B	C	D	E	F	m <sup>3</sup> /sec	c.f.m.	dbA	
LCAHT404T	16	40	320	406	450	486	8	12	1.5	3180	62	
LCAHT454T	18	45	350	456	500	536	8	12	2.0	4240	65	
LCAHT504T	20	50	400	508	560	588	12	12	2.8	5930	69	
LCAHT564T	22	56	400	568	620	648	12	12	3.9	8260	72	
LCAHT634T	25	63	400	640	690	720	12	12	6.0	12650	75	
LCAHT714T	28	71	500	710	770	800	12	12	7.9	16770	84	
LCAHT804T	32	80	600	810	860	900	16	12	11.4	24160	85	
LCAHT904T	36	90	700	910	970	1010	16	15	16.4	34750	89	
LCAHT1004T	40	100	700	1010	1070	1110	16	15	23.6	50000	90	

## "PAHT" - Wall Mounted Axial Fans



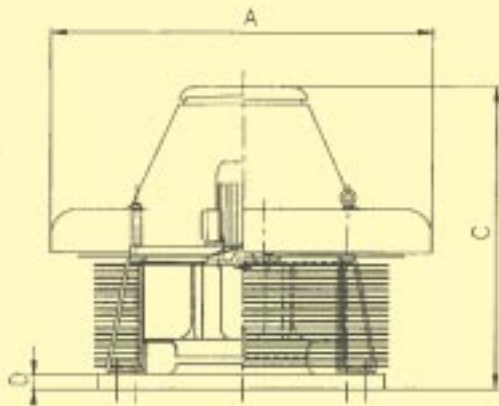
Model	Fan Size		Dimensions (mm)						Airflow		Sound
	ins	cm	A	B	B1	C	D	E	m <sup>3</sup> /sec	c.f.m.	dbA
PAHT404T	16	40	406	220	380	490	450	9	1.5	3180	62
PAHT454T	18	45	456	220	400	540	500	9	2.0	4240	65
PAHT504T	20	50	508	250	430	650	600	9	2.8	5930	69
PAHT564T	22	56	568	250	430	700	630	12	3.9	8260	72
PAHT634T	25	63	640	250	460	800	730	12	6.0	12650	75
PAHT714T	28	71	710	250	500	850	800	12	7.9	16770	84
PAHT804T	32	80	810	300	520	950	900	16	11.4	24160	85
PAHT904T	36	90	910	300	710	1060	1010	16	16.4	34750	89
PAHT1004T	40	100	1010	350	770	1160	1110	16	23.6	50000	90

## Performance - Axial Fans

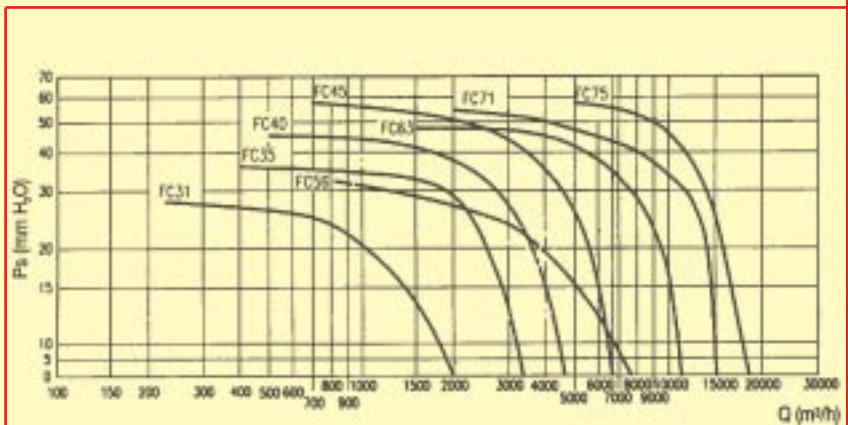
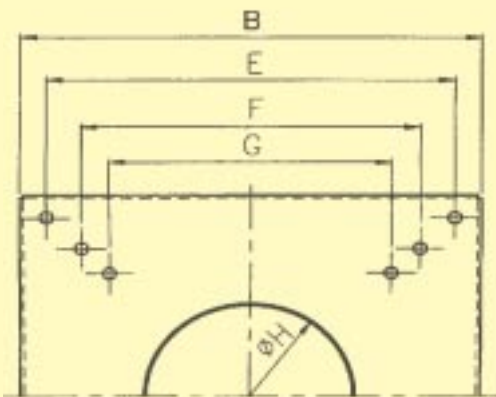


## "SMOKEX"<sup>®</sup> - TECHNICAL DATA - CENTRIFUGAL FANS

### "CRHHT" - Centrifugal Roof Fan



Model	Fan Size		Dimensions (mm)								Power Kw	Airflow		Sound dbA
	ins	cm	A	B	C	D	E	F	G	ØH		m <sup>3</sup> /sec	c.f.m.	
CRHHT314	12	31	540	400	530	38	-	360	307	220	0.12	0.53	1120	58
CRHHT354	14	35	800	500	600	38	-	450	380	270	0.25	0.68	1445	63
CRHHT404	16	40	800	650	650	38	600	530	471	296	0.37	1.17	2480	68
CRHHT454	18	45	800	650	650	38	600	530	471	296	0.75	1.47	3130	72
CRHHT566	22	56	950	760	730	38	710	650	550	398	0.55	1.88	4010	66
CRHHT636	25	63	1100	930	890	38	870	775	665	439	1.1	2.77	5980	68
CRHHT716	28	71	1100	930	890	38	870	775	665	484	1.5	3.47	7375	72
CRHHT756	31	75	1100	930	890	38	870	775	665	484	1.8	4.3	9110	77



## "SMOKEX"<sup>®</sup> ACCESSORIES

There is a wide range of accessories available for the "Smokex"<sup>®</sup> fans. They include:

- Soaker sheets - in moulded glass-fibre. Most common roof profiles available.
- Purlin support boxes - in galvanised steel.
- Anti-vibration mounts - robust steel construction with adjustable height.
- Connecting flanges - for connection to circular ductwork.
- Mounting feet - to provide sturdy support.
- Flexible connectors - in high temperature woven glass-fibre.
- Speed changeover switch - allows use of fans in two speed modes: low speed for continuous general ventilation; high speed for emergency smoke extraction.

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