

Horizontal air discharge



With plenum box



With damper blade



With light baffle

# Ceiling diffusers

## Type ADT



### For four-way horizontal supply air discharge, with fixed air control blades aluminium diffuser face

#### Square ceiling diffusers

- Nominal sizes 150, 225, 300, 375, 450, 525, 600
- Volume flow rate range 25 - 681 l/s or 90 - 2450 m<sup>3</sup>/h
- Square diffuser face
- Diffuser face made of aluminium with powder-coat finish
- For supply and extract air
- For variable and constant volume flows
- For all types of ceiling systems
- High induction results in a rapid reduction of temperature differences and airflow velocities

#### Optional equipment and accessories

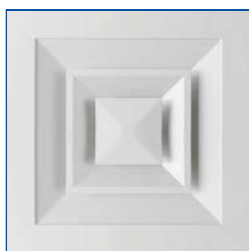
- Exposed diffuser face available in RAL CLASSIC colours
- Horizontal or vertical duct connection
- Blanking plates for adjusting the discharge direction
- Plenum box with cord-operated damper blade and pressure tap

Type		Page
ADT	General information	1.4 – 16
	Order code	1.4 – 19
	Quick sizing	1.4 – 20
	Dimensions and weight	1.4 – 22
	Installation details	1.4 – 28
	Specification text	1.4 – 30
	Basic information and nomenclature	1.6 – 1

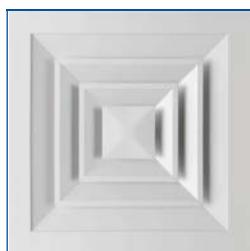
### Variants

Product examples

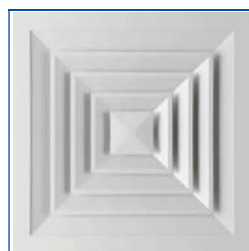
**ADTT/150**



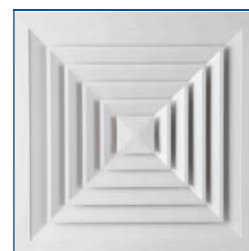
**ADTT/225**



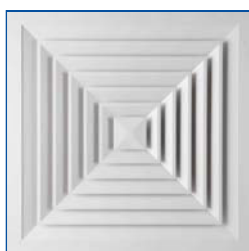
**ADTT/300**



**ADTT/375**



**ADTT/450**



**ADTT/525**



**ADTT/600**



### Installation examples

**Installation in T-bar ceilings,  
arrangement in a row**



**Installation in continuous ceilings**



**Description**

**Application**

- Type ADT ceiling diffusers are used as supply air or extract air diffusers for comfort zones
- Attractive design element for building owners and architects with demanding aesthetic requirements
- Horizontal 1, 2, 3 or 4 way supply air discharge for mixed flow ventilation
- High induction results in a rapid reduction of temperature differences and airflow velocities (supply air variant)
- For variable and constant volume flows
- For supply air to room air temperature differences from -10 to +10 K
- For room heights up to 4 m (lower edge of suspended ceiling)
- For all types of ceiling systems

**Variant**

- Square diffuser face

**Connection**

- A: Diffuser face only
- AG: Diffuser face with opposed blade volume control damper

**Nominal sizes**

- 150, 225, 300, 375, 450, 525, 600

**Accessories**

- Plenum box with horizontal or vertical connection.
- Return air baffle

**Special characteristics**

- Horizontal 1, 2, 3 or 4 way supply air discharge
- Diffuser face made of aluminium
- For all types of ceiling systems
- Horizontal or vertical duct connection

**Parts and characteristics**

- Square diffuser face with fixed air control blades
- Diffuser front frame
- Simple installation of the diffuser face due to clip fix plenum

**Construction features**

- Spigot suitable for circular ducts to EN 1506 or EN 13180

**Materials and surfaces**

- Diffuser face made of extruded aluminium sections
- Plenum box made of galvanised sheet steel
- Attachments powder-coated RAL 9005, black
- P3: Border and blades powder-coated, RAL9010:20%
- P6: Powder-coated, RAL CLASSIC colour  
Gloss level: 30%

**Installation and commissioning**

- Preferably for rooms with a clear height up to 4.0 m
- Flush ceiling installation
- Horizontal or vertical duct connection
- If necessary, carry out volume flow rate balancing with damper blade

**Standards and guidelines**

- Sound power level of the air-regenerated noise measured according to EN ISO 5135

**Maintenance**

- Maintenance-free as construction and materials are not subject to wear
- Inspection and cleaning to VDI 6022

**Technical data**

<b>Nominal sizes</b>	150, 225, 300, 375, 450, 525, 600 mm
<b>Minimum volume flow rate</b>	25 – 375 l/s or 90 – 1350 m <sup>3</sup> /h
<b>Maximum volume flow rate, with L<sub>WA</sub> ≅ 40 dB(A)</b>	49 – 556 l/s or 175 – 2000 m <sup>3</sup> /h
<b>Supply air to room air temperature difference</b>	-10 to +10 K

### Function

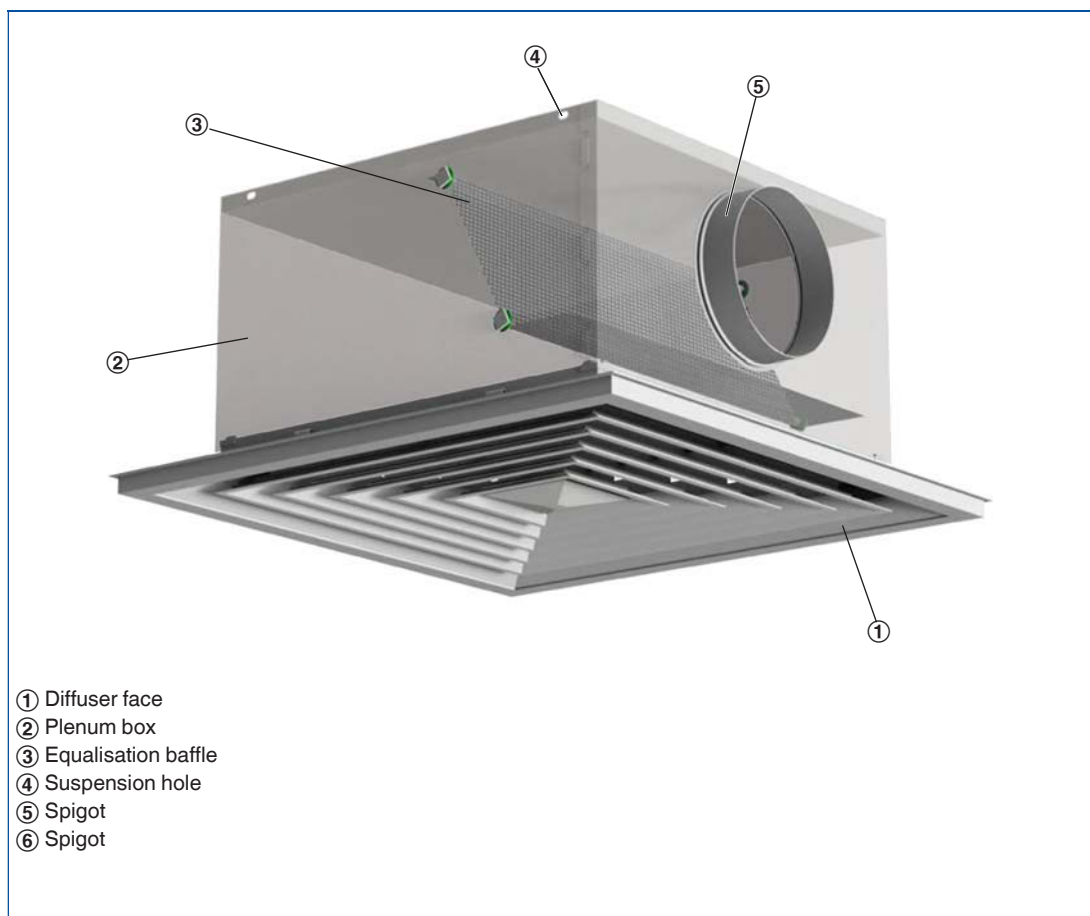
#### Functional description

Ceiling diffusers direct the air from air conditioning systems into the room. The resulting airflow induces high levels of room air, thereby rapidly reducing the airflow velocity and the temperature difference between supply air and room air. Ceiling diffusers allow for large volume flow rates. The result is a mixed flow ventilation in comfort zones, with good overall room ventilation, creating only very little turbulence in the occupied zone.

Type ADT ceiling diffusers have fixed blades. Horizontal air discharge is 1, 2, 3 or 4 way. The supply air to room air temperature difference may range from  $-10$  to  $+10$  K.

To give rooms an aesthetic, uniform look, Type ADT diffusers may also be used for extract air.

#### Schematic illustration of the ADT, with plenum box for horizontal duct connection



### Air patterns

#### Horizontal air discharge

#### Horizontal air discharge



**Principal dimensions**

**H<sub>1</sub> [mm]**

Distance (height) from the lower edge of the suspended ceiling to the lower edge of the diffuser face

**H<sub>2</sub> [mm]**

Distance (height) from the lower edge of the suspended ceiling to the upper edge of the diffuser

**H<sub>3</sub> [mm]**

Distance (height) of a ceiling diffuser with plenum box, from the lower edge of the diffuser face to the upper edge of the plenum box

**□Q [mm]**

Overall size of a square diffuser neck

**□Q<sub>f</sub> [mm]**

Overall size of a square diffuser face

**□Q<sub>2</sub> [mm]**

Cut out dimension of a square diffuser face

**□Q<sub>3</sub> [mm]**

Dimensions of a square plenum box

**A [mm]**

Position of the spigot, defined by the distance of the spigot centre line to the lower edge of the diffuser face

**C [mm]**

Length of the spigot

**∅D [mm]**

Outside diameter of the spigot

**m [kg]**

Weight

**Nomenclature**

**L<sub>WA</sub> [dB(A)]**

A-weighted sound power level of air-regenerated noise

**$\dot{V}$  [m<sup>3</sup>/h] and [l/s]**

Volume flow rate

**Δt<sub>z</sub> [K]**

Supply air temperature difference

**Δp<sub>t</sub> [Pa]**

Total differential pressure

**A<sub>eff</sub> [m<sup>2</sup>]**

Effective air discharge area

All sound power levels are based on 1 pW.

### Sizing with the help of this catalogue

This catalogue provides convenient quick sizing tables for ceiling diffusers. The tables give supply air volume flow rates for all nominal sizes. The maximum volume flow rates are for an open damper blade. A smaller opening of the damper blade results in higher sound power levels and a higher total differential pressure. The tables show values for damper blade positions 45° and 90°.

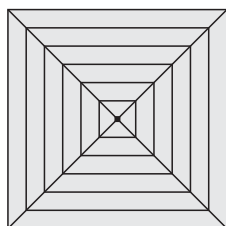
Sizing data for other volume flow rates and damper blade positions can be determined quickly and precisely using the Easy Product Finder design programme.

All performance tables relate to 4 way face configuration. Performance data for blanked discharge or alternative face configurations available on request.

### Diffuser face configuration

Standard

#### 4-way face

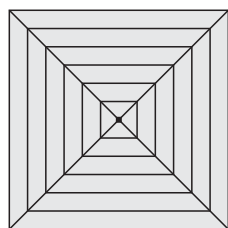


### ADT\*-A (face only)

Quick sizing tables provide a good overview of the volume flow rates and corresponding sound power levels and differential pressures.

Exact values for all parameters can be determined with our Easy Product Finder design programme.

#### 4-way face



#### Supply Air

Nominal size	$\dot{V}$		$\Delta p_t$ Pa	$L_{WA}$ dB(A)
	l/s	m <sup>3</sup> /h		
150	25	90	8	21
	30	108	12	27
	35	126	16	31
	40	144	21	35
225	35	126	3	<15
	55	198	7	22
	75	270	14	31
	95	342	22	38
300	60	216	3	<15
	95	342	7	24
	130	468	14	33
	160	576	21	39
375	90	324	3	<15
	160	576	8	25
	220	792	14	35
	270	972	22	41
450	135	486	3	16
	235	846	8	28
	310	1116	14	36
	380	1368	22	42
525	180	648	3	15
	275	990	7	27
	370	1332	13	35
	455	1638	20	42
600	230	828	4	17
	340	1224	8	29
	445	1602	14	36
	550	1980	22	43

#### Extract Air

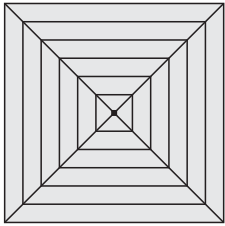
Nominal size	$\dot{V}$		$\Delta p_t$ Pa	$L_{WA}$ dB(A)
	l/s	m <sup>3</sup> /h		
150	25	90	8	18
	30	108	10	24
	35	126	14	28
	40	144	18	32
225	35	126	3	<15
	55	198	6	23
	75	270	12	32
	95	342	19	39
300	60	216	3	<15
	95	342	6	25
	130	468	12	35
	160	576	18	41
375	90	324	3	<15
	160	576	7	31
	220	792	13	41
	270	972	20	47
450	135	486	3	17
	235	846	7	33
	310	1116	13	42
	380	1368	19	48
525	180	648	3	17
	275	990	6	30
	370	1332	11	39
	455	1638	17	45
600	230	828	3	18
	340	1224	6	30
	445	1602	11	38
	550	1980	17	44

## ADT\*...ZH\*...M (supply air with plenum)

Performance data applies to 4-way diffuser only.

For performance data on alternative diffuser face variants, please contact TROX.

### 4-way face



## Quick sizing – sound power level and total differential pressure

Nominal size	V̇		Damper blade position					
			0°		45°		90°	
			Δp <sub>t</sub>	L <sub>WA</sub>	Δp <sub>t</sub>	L <sub>WA</sub>	Δp <sub>t</sub>	L <sub>WA</sub>
	l/s	m <sup>3</sup> /h	Pa	dB(A)	Pa	dB(A)	Pa	dB(A)
150	25	90	13	21	15	21	24	23
	30	108	19	26	22	26	35	28
	35	126	26	31	29	31	47	33
	40	144	34	34	39	35	62	37
225	35	126	6	<15	7	<15	12	<15
	55	198	14	24	16	24	29	27
	75	270	26	32	30	33	54	36
	95	342	41	39	49	39	87	43
300	60	216	6	<15	7	<15	13	16
	95	342	14	25	17	25	33	29
	130	468	26	34	32	34	61	38
	160	576	40	39	48	40	92	44
375	90	324	5	<15	5	<15	9	15
	160	576	14	30	16	30	27	32
	220	792	27	39	31	39	52	41
	270	972	41	45	47	45	78	47
450	135	486	5	16	6	16	11	19
	235	846	16	32	18	32	33	34
	310	1116	28	40	32	40	57	42
	380	1368	41	45	48	45	86	48
525	180	648	6	16	8	16	16	22
	275	990	14	28	18	28	38	34
	370	1332	25	36	32	37	68	42
	455	1638	39	42	49	43	103	48
600	230	828	7	15	10	16	24	25
	340	1224	16	26	22	28	52	36
	445	1602	27	33	37	35	90	44
	550	1980	42	39	57	41	137	50

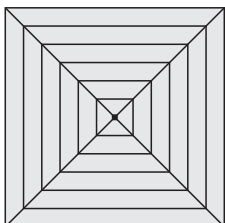
## Quick sizing – Aerodynamic data

Performance data applies to 4-way diffuser only.

Tables provide throw length to a maximum, mean air velocity of 0.5m/s.

Minimum installation centres for diffusers based on installation height of 2.7m - 2.9m should be > 2x throw length to V<sub>L</sub>0.5m/s

### 4-way face



Nominal size	V̇		Aerodynamic Data
			V <sub>L</sub> 0.5
			m
	l/s	m <sup>3</sup> /h	
150	25	90	0.6
	30	108	0.7
	35	126	0.8
	40	144	0.9
225	35	126	0.7
	55	198	1.1
	75	270	1.4
	95	342	1.8
300	60	216	0.9
	95	342	1.4
	130	468	1.9
	160	576	2.3
375	90	324	1.1
	160	576	1.9
	220	792	2.6
	270	972	3.2

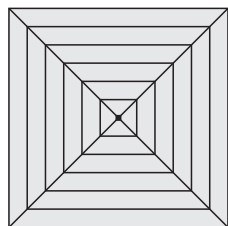
Nominal size	V̇		Aerodynamic Data
			V <sub>L</sub> 0.5
			m
	l/s	m <sup>3</sup> /h	
450	135	486	1.3
	235	846	2.3
	310	1116	3.0
	380	1368	3.7
525	180	648	1.5
	275	990	2.3
	370	1332	3.1
	455	1638	3.9
600	230	828	1.7
	340	1224	2.5
	445	1602	3.3
	550	1980	4.1

## ADT\*...ZH\*...AG (supply air with plenum)

Performance data applies to 4-way diffuser only.

For performance data on alternative diffuser face variants, please contact TROX.

### 4-way face



## Quick sizing – sound power level and total differential pressure

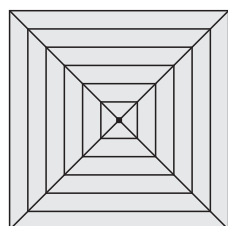
Nominal size	$\dot{V}$		Damper blade position					
			100%		50%		25%	
	l/s	m <sup>3</sup> /h	$\Delta p_t$ Pa	$L_{WA}$ dB(A)	$\Delta p_t$ Pa	$L_{WA}$ dB(A)	$\Delta p_t$ Pa	$L_{WA}$ dB(A)
150	25	90	13	17	17	23	27	29
	30	108	19	22	24	29	39	35
	35	126	26	27	33	34	53	40
	40	144	34	31	43	38	70	44
225	35	126	5	<15	7	<15	11	20
	55	198	14	22	17	26	27	34
	75	270	25	32	31	36	51	43
	95	342	41	39	50	43	82	50
300	60	216	5	<15	7	<15	11	22
	95	342	14	25	17	28	27	36
	130	468	25	34	31	37	51	46
	160	576	39	41	47	44	77	52
375	90	324	4	<15	6	<15	9	22
	160	576	14	26	18	32	29	39
	220	792	27	36	34	42	55	49
	270	972	40	42	51	48	83	55
450	135	486	5	<15	6	17	10	25
	235	846	15	30	19	34	31	42
	310	1116	27	38	33	43	54	51
	380	1368	40	44	50	49	82	57
525	180	648	6	17	7	17	11	27
	275	990	14	29	16	30	26	40
	370	1332	24	38	29	40	47	49
	455	1638	37	44	44	46	71	56
600	230	828	7	16	8	18	13	27
	340	1224	15	28	17	30	27	39
	445	1602	26	36	30	38	47	47
	550	1980	40	42	46	45	72	54

## ADT\*...ZV\* (supply air with plenum)

Performance data applies to 4-way diffuser only.

For performance data on alternative diffuser face variants, please contact TROX.

### 4-way face



## Quick sizing – sound power level and total differential pressure

Nominal size	$\dot{V}$		No Damper	
			$\Delta p_t$ Pa	$L_{WA}$ dB(A)
	l/s	m <sup>3</sup> /h		
150	25	90	8	21
	30	108	12	27
	35	126	16	31
	40	144	21	35
225	35	126	3	<15
	55	198	7	22
	75	270	14	31
	95	342	22	38
300	60	216	3	<15
	95	342	7	24
	130	468	14	33
	160	576	21	39
375	90	324	2	<15
	160	576	8	25
	220	792	14	35
	270	972	22	41



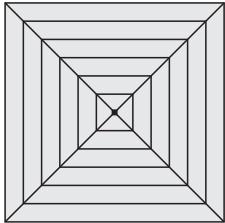
## ADT-\*.ZV-\*

(supply air with plenum)

Performance data applies to 4-way diffuser only.

For performance data on alternative diffuser face variants, please contact TROX.

### 4-way face



Nominal size	$\dot{V}$		No Damper	
			$\Delta p_t$	$L_{WA}$
	l/s	m <sup>3</sup> /h	Pa	dB(A)
450	135	486	3	<15
	235	846	8	28
	310	1116	14	36
	380	1368	22	42
525	180	648	3	<15
	275	990	7	27
	370	1332	13	35
	455	1638	20	42
600	230	828	4	17
	340	1224	8	29
	445	1602	14	36
	550	1980	22	43

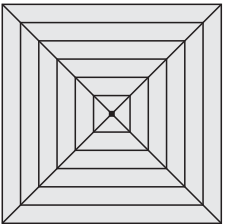
## ADT-\*.AH-\*.M

(extract air with plenum)

Performance data applies to 4-way diffuser only.

For performance data on alternative diffuser face variants, please contact TROX.

### 4-way face



### Quick sizing – sound power level and total differential pressure

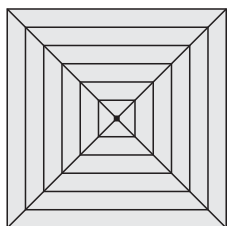
Nominal size	$\dot{V}$		Damper blade position					
			0°		45°		90°	
			$\Delta p_t$	$L_{WA}$	$\Delta p_t$	$L_{WA}$	$\Delta p_t$	$L_{WA}$
	Pa	dB(A)	Pa	dB(A)	Pa	dB(A)		
150	25	90	11	20	12	20	20	23
	30	108	14	25	17	25	29	28
	35	126	19	30	22	30	40	32
	40	144	25	33	29	33	52	35
225	35	126	4	<15	5	<15	10	<15
	55	198	10	23	12	24	25	25
	75	270	19	32	22	32	47	34
	95	342	30	39	35	39	75	41
300	60	216	4	<15	5	<15	11	15
	95	342	10	26	12	26	29	28
	130	468	19	35	22	35	54	37
	160	576	28	41	33	41	81	43
375	90	324	3	16	4	16	7	17
	160	576	11	33	12	33	23	33
	220	792	20	42	23	42	44	42
	270	972	30	48	34	48	66	48
450	135	486	4	19	4	19	9	20
	235	846	11	35	13	35	28	36
	310	1116	20	43	23	43	49	44
	380	1368	30	49	34	49	74	50
525	180	648	4	19	5	19	15	22
	275	990	10	31	12	31	34	34
	370	1332	18	40	21	40	62	42
	455	1638	27	46	32	46	93	48
600	230	828	5	20	6	20	22	24
	340	1224	11	31	13	31	48	35
	445	1602	18	39	23	38	83	43
	550	1980	28	45	35	44	127	49

### ADT\*...AV- (extract air with plenum)

Performance data applies to 4-way diffuser only.

For performance data on alternative diffuser face variants, please contact TROX.

#### 4-way face



### Quick sizing – sound power level and total differential pressure

Nominal size	$\dot{V}$		No Damper	
			$\Delta p_t$	$L_{WA}$
	l/s	m <sup>3</sup> /h	Pa	dB(A)
150	25	90	10	18
	30	108	14	24
	35	126	19	28
	40	144	25	32
225	35	126	3	<15
	55	198	8	23
	75	270	18	30
	95	342	16	32
300	60	216	3	<15
	95	342	9	25
	130	468	16	35
	160	576	25	41
375	90	324	3	<15
	160	576	9	31
	220	792	16	41
	270	972	24	47
450	135	486	3	17
	235	846	9	33
	310	1116	17	42
	380	1368	25	48
525	180	648	4	17
	275	990	9	30
	370	1332	16	39
	455	1638	25	45
600	230	828	3	18
	340	1224	11	30
	445	1602	19	38
	550	1980	28	44

Order code

ADT

<b>ADTA – 25 – 4 – AG / 450 x 450 / P3 / RAL9010 / 20%</b>					
<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>

**1 Type**

ADTA  
ADTM  
ADTT  
ADTS  
ADTF

**2 Pip-plate dimension [mm] <sup>1</sup>**

0 No pip-plate (border only)  
25 Pip-plate with 25mm pip height  
(to suit Burgess ceiling systems)  
27 Pip-plate with 27.5mm pip height  
(to suit SAS system 150 ceilings)

**3 Discharge directions**

4 4 way blow face

**4 Rear attachments**

A Diffuser face only  
AG Opposed blade damper fitted to rear of diffuser<sup>2</sup>

**5 Nominal diffuser neck size**

150 x 150  
225 x 225  
300 x 300  
375 x 375  
450 x 450  
525 x 525  
600 x 600

**6 Exposed surface**

P3 Powder coat to RAL 9010:20% (white)  
P4 Powder coat to RAL 9005:20% (black)  
P6 Special Finish - RAL CLASSIC colour. Gloss level: 30%

<sup>1</sup> Pip-plate option only available for type ADTA

<sup>2</sup> Where TROX plenums are to be supplied, AG damper should be specified within plenum assembly

Order code

Blanking plate

<b>BP-ADT / 450 / P4 / RAL9005 / 20%</b>		
<b>1</b>	<b>2</b>	<b>3</b>

**1 Type**

BP-ADT Quadrant blanking plate to suit ADT diffuser

**2 Nominal diffuser neck size**

150, 225, 300, 375, 450, 525, 600

**3 Exposed surface**

P4 Powder coat to RAL 9005:20% (black)  
P6 Special Finish - State colour RAL..., BS... Gloss level: 30%

Order example

**ADTA-25-4-AG / 450x450 / P3**

Border style	ADTA (clip-in ceiling grid)
Pip-plate style	With pip-plate (X = 25mm)
Damper blade for volume flow rate balancing	With opposed blade damper
Nominal diffuser size	450
Exposed surface	RAL 9010, pure white, gloss level 20 %

Order example

**BP-ADT / 450 / P4**

Nominal diffuser neck size	450
Exposed surface	RAL 9005, black, gloss level 20 %

Order code

AKV-ADT

AKV-ADT – ZH - D - AG / 450 x 398 x 450 x 572

1 2 3 4 5 6 7

1 Connection

**ZH** Horizontal supply  
**AH** Horizontal extract  
**ZV** Vertical supply  
**AV** Vertical extract  
**RA** Return air baffle

2 Lining

**0** No entry: Not lined  
**D** 12mm foam lining

3 Damper blade for volume flow rate balancing

**0** No damper  
**M** Spigot damper <sup>1</sup>  
**MC** Cord operated spigot damper <sup>1</sup>  
**AG** Opposed blade damper fitted to plenum  
<sup>1</sup> Only for connection style ...-ZH / AH

4 Diffuser nominal neck size [mm]

150, 225, 300, 375, 450, 525, 600

5 Spigot diameter [mm]

Ø98, Ø123, Ø138, Ø148, Ø158, Ø178,  
Ø198, Ø222, Ø248, Ø278, Ø298, Ø313,  
Ø348, Ø353, Ø398, Ø448\*, Ø498\*, Ø558\*

\*Not in combination with ...-M, ...-MC\*

6 Plenum active size [mm]

Full size active:  
Plenum active size = diffuser neck size  
Reduce size active:  
Plenum active size < diffuser neck size

7 Plenum height [mm]

**ZH** ØD + 174mm  
**AH** ØD + 174mm  
**ZV** 242mm  
**AV** 242mm

NB: Options 3, 5, 6, 7 not available with ...-RA return air baffle. Return air baffle supplied RAL9005 (black) as standard. Other colours available on request.

Order example

AKV-ADT-ZH-D-AG / 450x398x450x572

Connection style	Horizontal supply
Internal lining	12mm foam
Damper blade for volume flow rate balancing	With opposed blade damper
Diffuser nominal size	450x450
Spigot diameter	Ø398mm
Plenum active size	450x450 (full size active)
Plenum height	572mm (ØD+174mm)

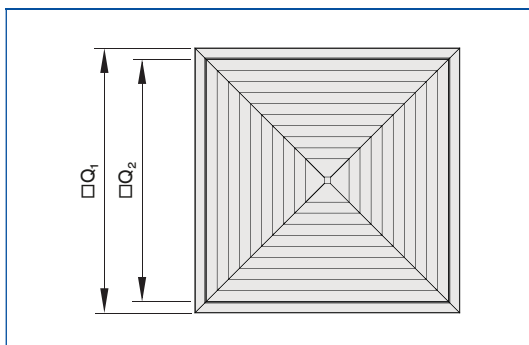
Order example

AKV-ADT-RA-D / 450

Connection style	Return air baffle
Internal lining	12mm foam
Diffuser nominal size	450x450
Colour	RAL9005:25%

### Diffuser face

### ADTA



### Dimensions

Nominal size	□Q <sub>1</sub>	□Q <sub>2</sub>	A <sub>eff</sub>
	mm		m <sup>2</sup>
150	300	250	0.0118
225	375	325	0.0171
300	450	400	0.0297
375	525	475	0.0446
450	600	550	0.0655
525	675	625	0.0869

### ADTA-A



ADTA/450

### Variant

- Ceiling diffuser with square diffuser face suitable for clip in ceiling systems

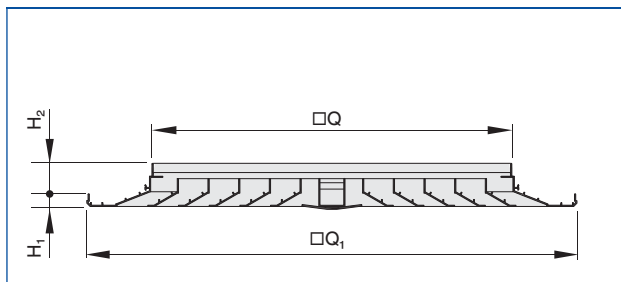
### Nominal sizes

- 150, 225, 300, 375, 450, 525

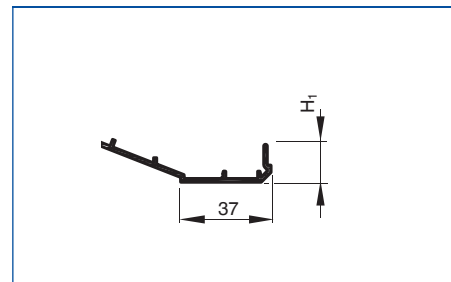
### Parts and characteristics

- Square diffuser face
- Simple installation of the diffuser face due to clip in pip-plate or via TROX clip fix plenum box.

### ADTA-A



### Border



### Pip plate;

Pip height ('X') should be checked with the ceiling system manufacturer and specified within the diffuser order code.

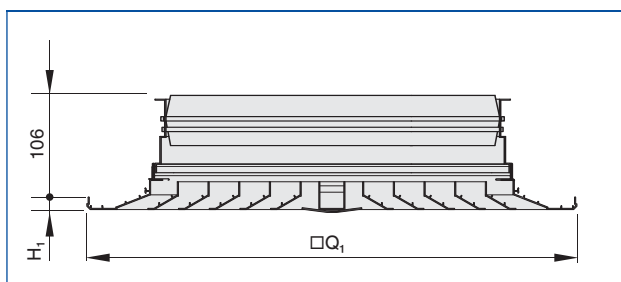
### SAS system 150:

27.5mm

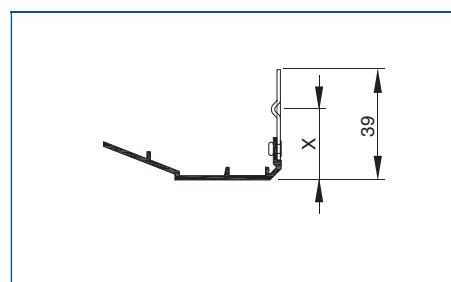
### Burgess ceilings:

25.0mm

### ADTA-AG



### Pip-plate



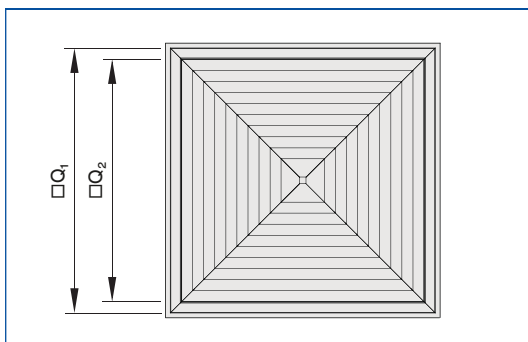
### Dimensions [mm] and weight [kg]

Nominal size	□Q	□Q <sub>1</sub>	H <sub>1</sub>	H <sub>2</sub>	m
	mm				kg
150	140	300	15	38	0.8
225	215	375	15	38	1.0
300	290	450	15	38	1.5
375	365	525	15	38	1.8
450	440	600	15	38	2.2
525	515	675	15	38	2.4

Weights for ADT face only, without attachments.

### Diffuser face

### ADTM



### Dimensions

Nominal size	$\square Q_1$	$\square Q_2$	$A_{\text{eff}}$
	mm		$\text{m}^2$
150	283	250	0.0118
450	583	550	0.0655

### ADTM-A

#### Variant

- Ceiling diffuser with square diffuser face suitable for exposed threadline ceiling systems

#### Nominal sizes

- 150, 450

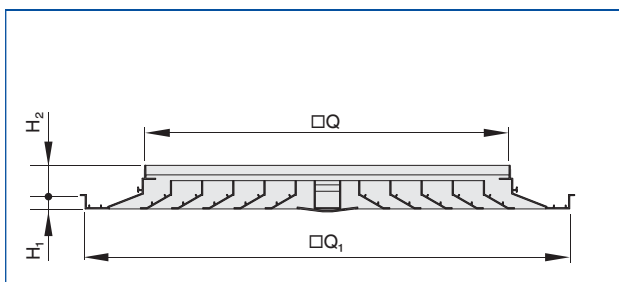
#### Parts and characteristics

- Square diffuser face
- Simple installation of the diffuser face due to special border profile or via TROX clip fix plenum box.

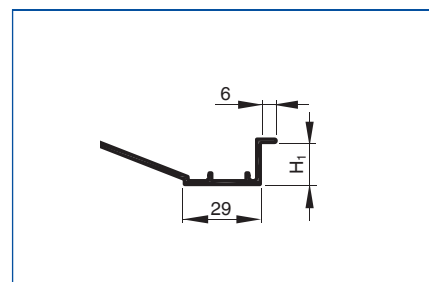


ADTM/450

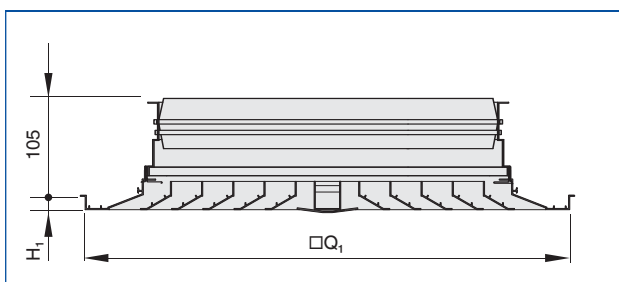
### ADTM-A



### Border



### ADTM-AG



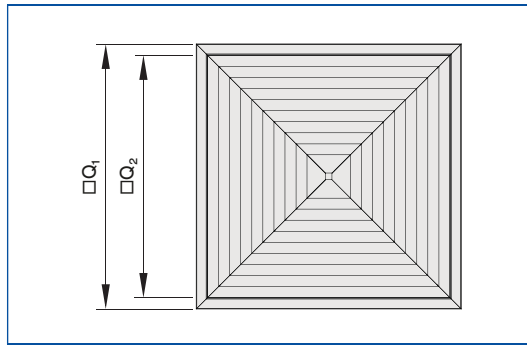
### Dimensions [mm] and weight [kg]

Nominal size	$\square Q$	$\square Q_1$	$H_1$	$H_2$	m
	mm				kg
150	140	283	16	37	0.8
450	440	583	16	37	2.2

Weights for ADT face only, without attachments.

Diffuser face

ADTT



Dimensions

Nominal size	$Q_1$	$Q_2$	$A_{eff}$
	mm		$m^2$
150	295	250	0.0118
225	370	325	0.0171
300	445	400	0.0297
375	520	475	0.0446
450	595	550	0.0655
525	670	625	0.0869
600	745	700	0.1125

ADTT-A



ADTT/450

Variant

- Ceiling diffuser with square diffuser face suitable for 'lay-in' exposed tee ceiling systems or installation within closed (plasterboard) ceilings.

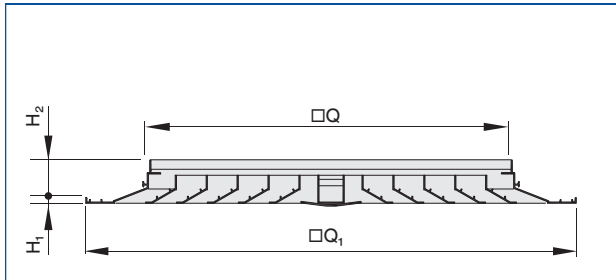
Nominal sizes

- 150, 225, 300, 375, 450, 525, 600

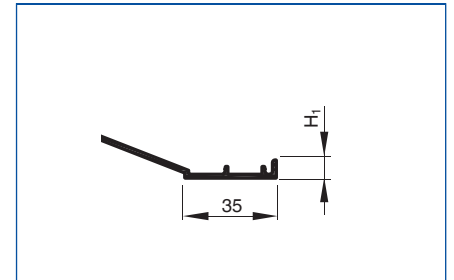
Parts and characteristics

- Square diffuser face
- Simple installation of the diffuser within supporting ceiling grid or via TROX clip fix plenum box.

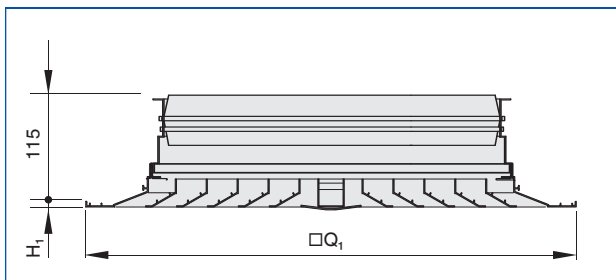
ADTT-A



Border



ADTT-AG



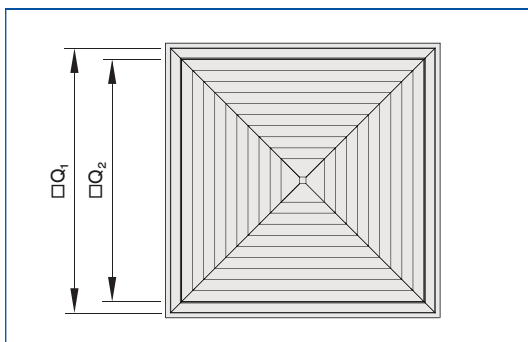
Dimensions [mm] and weight [kg]

Nominal size	$Q$	$Q_1$	$H_1$	$H_2$	$m$
	mm				
150	140	295	7	46	0.8
225	215	370	7	46	1.0
300	290	445	7	46	1.5
375	365	520	7	46	1.8
450	440	595	7	46	2.2
525	515	670	7	46	2.4
600	590	745	7	46	2.7

Weights for ADT face only, without attachments.

### Diffuser face

### ADTS



### Dimensions

Nominal size	□Q <sub>1</sub>	□Q <sub>2</sub>	A <sub>eff</sub>
	mm		m <sup>2</sup>
150	283	250	0.0118
450	583	550	0.0655

### ADTS-A

#### Variant

- Ceiling diffuser with square diffuser face suitable for exposed threadline ceiling systems

#### Nominal sizes

- 150, 450

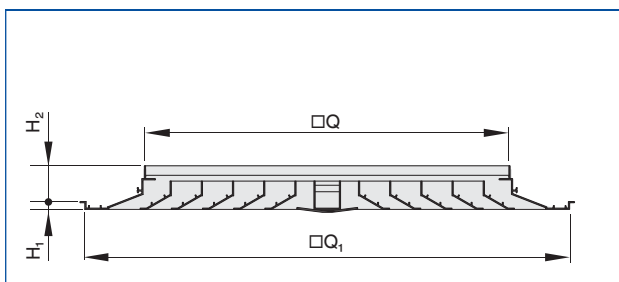
#### Parts and characteristics

- Square diffuser face
- Simple installation of the diffuser face due to special border profile or via TROX clip fix plenum box.

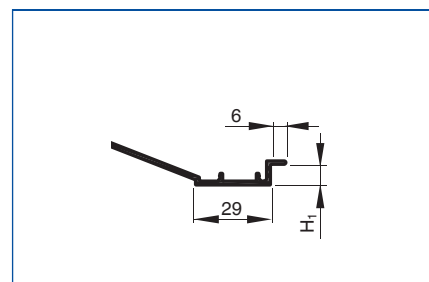


ADTS/450

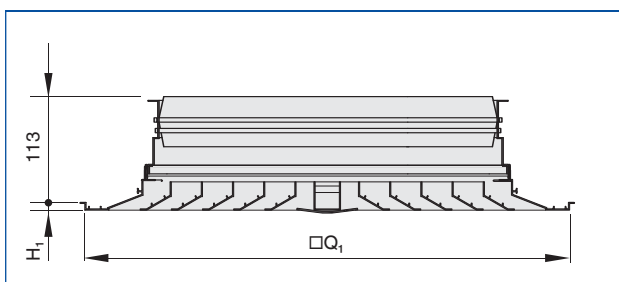
### ADTS-A



### Border



### ADTS-AG



### Dimensions [mm] and weight [kg]

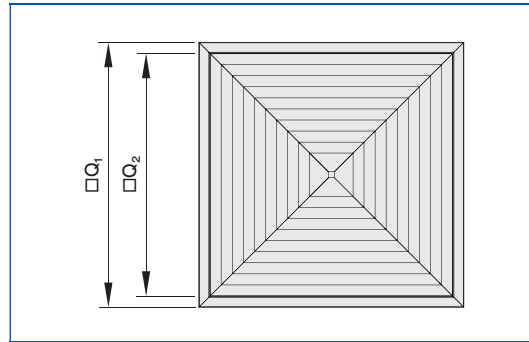
Nominal size	□Q	□Q <sub>1</sub>	H <sub>1</sub>	H <sub>2</sub>	m
	mm				kg
150	140	283	8	45	0.8
450	440	583	8	45	2.2

Weights for ADT face only, without attachments.



Diffuser face

ADTF



Dimensions

Nominal size	$\square Q_1$	$\square Q_2$	$A_{\text{eff}}$
	mm		m <sup>2</sup>
150	295	250	0.0118
225	370	325	0.0171
300	445	400	0.0297
375	520	475	0.0446
450	595	550	0.0655
525	670	625	0.0869
600	745	700	0.1125

ADTF-A



ADTF/600

Variant

- Ceiling diffuser with square diffuser face suitable for installation within closed (plasterboard) ceilings.

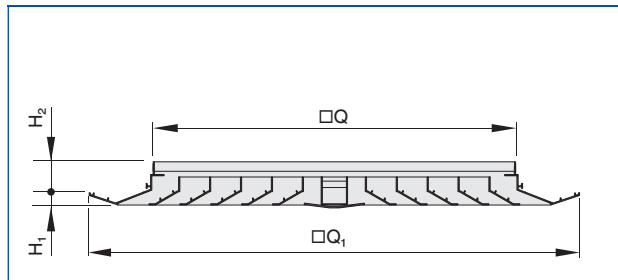
Nominal sizes

- 150, 225, 300, 375, 450, 525, 600

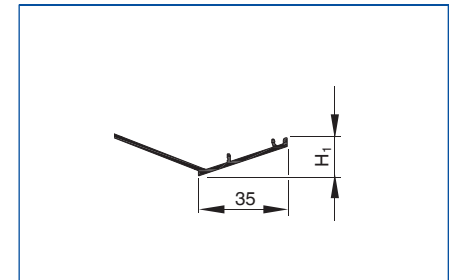
Parts and characteristics

- Square diffuser face
- Simple installation of the diffuser within supporting ceiling grid or via TROX clip fix plenum box.

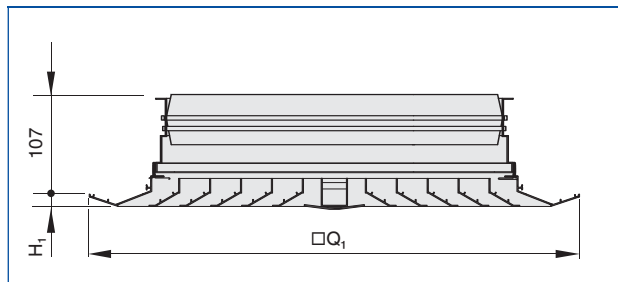
ADTF-A



Border



ADTF-AG



Dimensions [mm] and weight [kg]

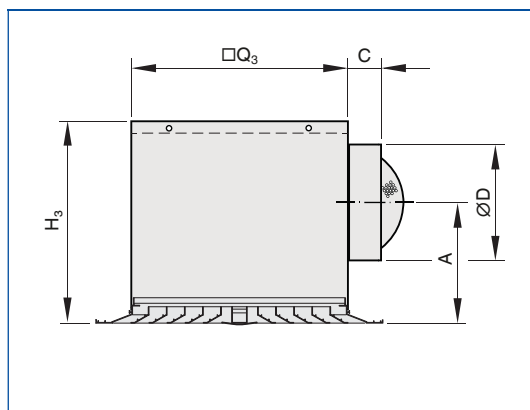
Nominal size	$\square Q$	$\square Q_1$	$H_1$	$H_2$	m
	mm				kg
150	140	295	15	38	0.8
225	215	370	15	38	1.0
300	290	445	15	38	1.5
375	365	520	15	38	1.8
450	440	595	15	38	2.2
525	515	670	15	38	2.4
600	590	745	15	38	2.7

Weights for ADT face only, without attachments.

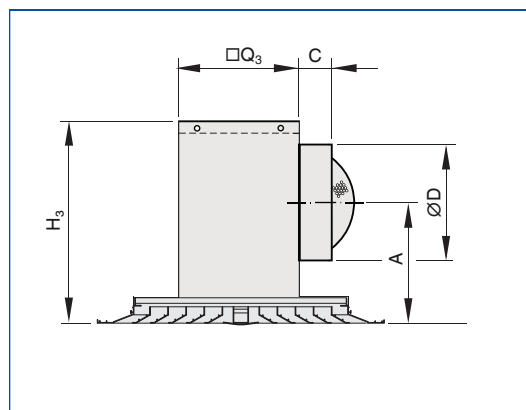
## Plenum Box

AKV-ADT...-ZH / AH

### Square diffuser face with full size plenum box for horizontal duct connection



### Square diffuser face with reduced plenum box for horizontal duct connection



### Dimensions [mm] and weight [kg]

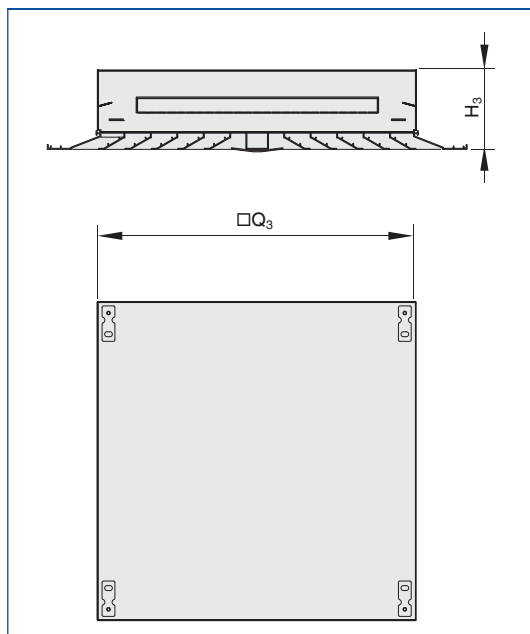
Nominal size	$\varnothing D$	$\square Q_3$	$H_3$	A	C
	mm				
150	148	148	322	223	40 / 75 <sup>1</sup>
225	198	223	372	248	40 / 75 <sup>1</sup>
300	248	298	422	273	40 / 75 <sup>1</sup>
375	348	373	522	323	40 / 75 <sup>1</sup>
450	398	448	572	348	40 / 75 <sup>1</sup>
525	398	523	572	348	40 / 75 <sup>1</sup>
600	398	598	572	348	40 / 75 <sup>1</sup>

1) Spigot length with 'M' spigot damper

## Return air baffle

Return air light baffle supplied loose for installation to diffuser on site using supplied spring clips.

AKV-ADT-RA...-\*



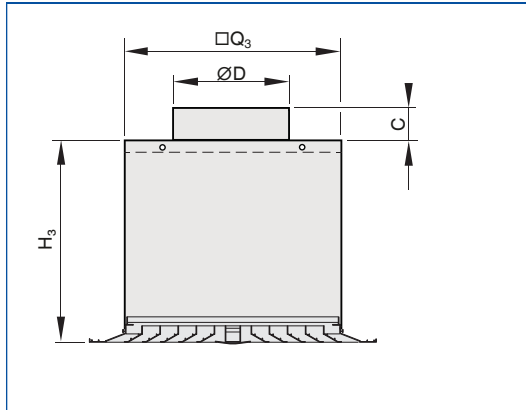
### Dimensions

Nominal size	$\square Q_3$	$H_3$
	mm	
150	150	114
225	225	119
300	300	124
375	375	129
450	450	134
525	525	139
600	600	144

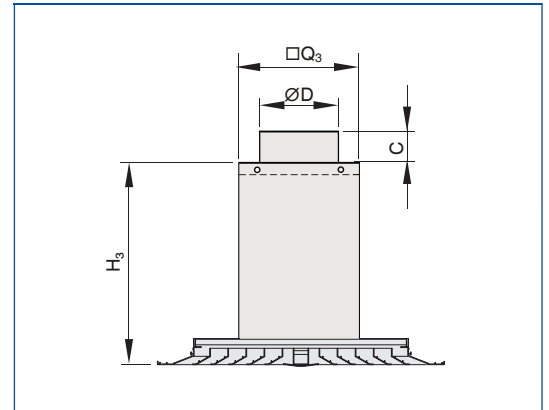
Plenum Box

AKV-ADT...-ZV / AV

Square diffuser face with full size plenum box for vertical duct connection



Square diffuser face with reduced plenum box for vertical duct connection

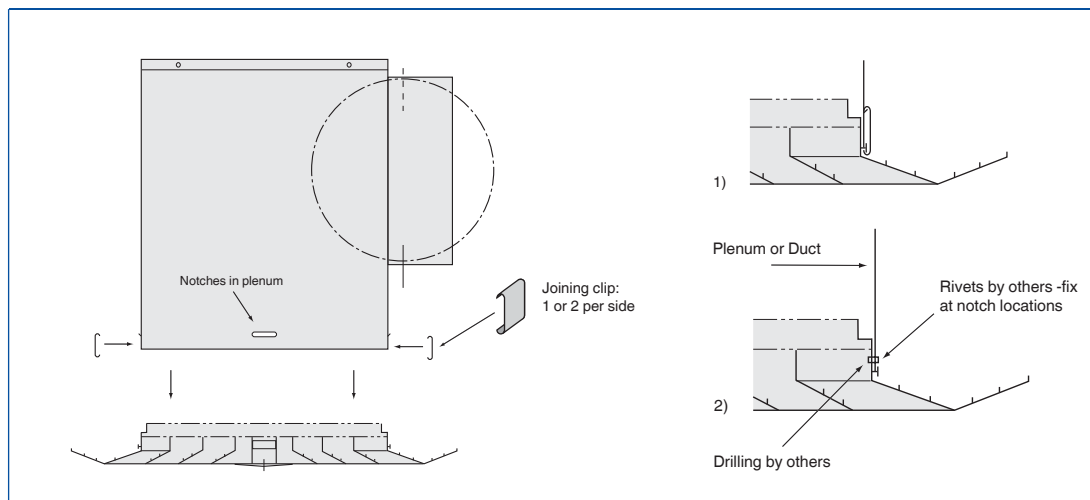


Dimensions [mm] and weight [kg]

Nominal size	ØD	□Q <sub>3</sub>	H <sub>3</sub>	C
	mm			
150	123	148	242	40
225	198	223	242	40
300	248	298	242	40
375	348	373	242	40
450	398	448	242	40
525	398	523	242	40
600	398	598	242	40

## Diffuser face fixing

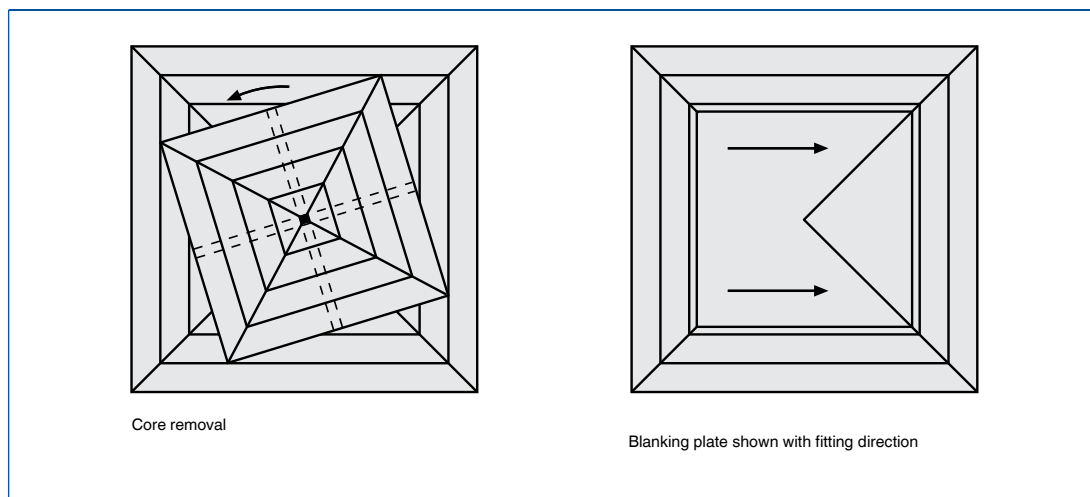
These are only schematic diagrams to illustrate installation details.



## Blanking plate fixing

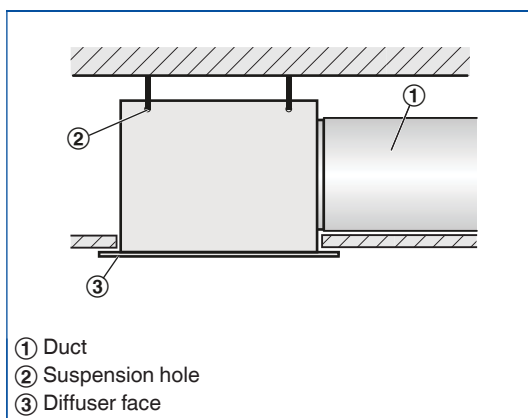
Quadrants are supplied loose for site installation to diffuser border to provide required discharge. Each quadrant is retained by 2 number push-on clips to enable push-fit onto border, see direction arrows shown below.

Note: If type AG opposed blade damper is fitted ensure damper adjuster is not obscured by blanking plate.



## Installation types

### Flush ceiling installation with square plenum box



- Horizontal duct connection
- Four suspension holes
- Suspension with cords, wires or hangers, to be provided by others

### Joining clip quantity

Nominal size	Qty
150	4
225	4
300	4
375	4
450	8
525	8
600	8

### Standard text

This specification text describes the general properties of the product. Texts for variants can be generated with our Easy Product Finder design programme.

Ceiling diffusers with square diffuser face. Supply air and extract air variants for comfort zones. Diffuser face with fixed air control blades for horizontal four-way air discharge. For installation into all types of suspended ceilings with various border variants. Ready-to-install component which consists of the aluminium diffuser face with fixed air control blades and aluminium diffuser front frame. Optional opposed blade damper, plenum box or return air baffle. Sound power level of the air-regenerated noise measured according to EN ISO 5135.

### Special characteristics

- Horizontal four-way supply air discharge
- Diffuser face made of aluminium
- For all types of ceiling systems
- Horizontal or vertical duct connection

### Materials and surfaces

- Diffuser face made of extruded aluminium sections
- AKV: Plenum box made of galvanised sheet steel
- AG: Damper made of galvanised steel, powder-coated RAL9005, black.
- P3: Diffuser face powder-coated RAL 9010:20%
- P6: Powder-coated, RAL CLASSIC colour Gloss level: 30%

### Technical data

- Nominal sizes: 150, 225, 300, 375, 450, 525, 600 mm
- Minimum volume flow rate: 25 – 375 l/s or 90 – 1350 m<sup>3</sup>/h
- Maximum volume flow rate, with  $L_{WA} \cong 40$  dB(A): 49 – 556 l/s or 175 – 2000 m<sup>3</sup>/h
- Supply air to room air temperature difference: -10 to +10 K

### Sizing data

- $\dot{V}$  \_\_\_\_\_ [l/s]
- $\Delta p_t$  \_\_\_\_\_ [Pa]
- $L_{WA}$  Air-regenerated noise \_\_\_\_\_ [dB(A)]

### Order options

#### Diffuser

#### 1 Type

ADTA  
ADTM  
ADTT  
ADTS  
ADTF

#### 2 Pip-plate dimension [mm] <sup>1</sup>

- 0 No pip-plate (border only)
- 25 Pip-plate with 25mm pip height (to suit Burgess ceiling systems)
- 27 Pip-plate with 27.5mm pip height (to suit SAS system 150 ceilings)

#### 3 Discharge directions

- 4 4 way blow face

#### 4 Rear attachments

- A Diffuser face only
- AG Opposed blade damper fitted to rear of diffuser<sup>2</sup>

#### 5 Nominal diffuser neck size

150 x 150  
225 x 225  
300 x 300  
375 x 375  
450 x 450  
525 x 525  
600 x 600

#### 6 Exposed surface

- P3 Powder coat to RAL 9010:20% (white)
- P4 Powder coat to RAL 9005:20% (black)
- P6 Powder-coated RAL CLASSIC colour. Gloss level: 30%

<sup>1</sup> Pip-plate option only available for type ADTA

<sup>2</sup> Where TROX plenums are to be supplied, AG damper should be specified within plenum assembly

### Order options

#### Blanking plate

##### 1 Type

**BP-ADT** Quadrant blanking plate to suit ADT diffuser

##### 2 Nominal diffuser neck size

**150, 225, 300, 375, 450, 525, 600**

##### 3 Exposed surface

**P4** Powder coat to RAL 9005:20% (black)

**P6** Powder-coated RAL CLASSIC colour.  
Gloss level: 30%

### Order options

#### Plenum

##### 1 Connection

**ZH** Horizontal supply

**AH** Horizontal extract

**ZV** Vertical supply

**AV** Vertical extract

**RA** Return air baffle

##### 2 Lining

**0** No entry: Not lined

**D** 12mm foam lining

##### 3 Damper blade for volume flow rate balancing

**0** No damper

**M** Spigot damper <sup>1</sup>

**MC** Cord operated spigot damper <sup>1</sup>

**AG** Opposed blade damper fitted to plenum

<sup>1</sup> Only for connection style ...-ZH / AH

##### 4 Diffuser nominal neck size [mm]

**150, 225, 300, 375, 450, 525, 600**

##### 5 Spigot diameter [mm]

Ø98, Ø123, Ø138, Ø148, Ø158, Ø178,  
Ø198, Ø222, Ø248, Ø278, Ø298, Ø313,  
Ø348, Ø353, Ø398, Ø448\*, Ø498\*, Ø558\*

\*Not in combination with ...-M, ...-MC\*

##### 6 Plenum active size [mm]

Full size active:

Plenum active size = diffuser neck size

Reduce size active:

Plenum active size < diffuser neck size

##### 7 Plenum height [mm]

**ZH** ØD + 174mm

**AH** ØD + 174mm

**ZV** 242mm

**AV** 242mm

NB: Options 3, 5, 6, 7 not available with ...-RA return air baffle. Return air baffle supplied RAL9005 (black) as standard. Other colours available on request.