



ht-s

2012



Midtherm
Flue Systems Ltd.

Midtherm Flue Systems Limited is an independent British manufacturing company producing a wide range of flue and chimney products, along with associated components and services. Established for over 30 years, Midtherm products are installed worldwide including Poland, Oman, Libya, Hong Kong, China and the USA.

Quality Assurance

All products are controlled by a Quality Assurance System certified to ISO 9001:2008.



Product

Midtherm HT-S is a Class 1 Chimney manufactured with the following specification using the latest manufacturing and welding technology ensuring high quality and value for money.

HT-S has a 0.5mm 316L 2B grade stainless steel inner liner with a welded seam and a 0.5mm 304 BA grade stainless steel outer casing with a welded seam. Insulation is 25mm high density mineral wool 128kg/m³.

Midtherm has a continuous improvement policy and feedback from customers and installation engineers encouraged us to improve our very popular 125mm to 300mm diameter HT Plus system still further.

HT-S and has a neater, more modern appearance, and an improved fit on the joints. The internal liner is unchanged, the external liner now has a mechanically formed socket and spigot connection that ensures a consistent easy, but close fitting joint every time.

The improved locking band has an overcentre stainless steel clip, that is easier to secure. This locking band is now a channel type, giving a smooth line to the new system and improving the aesthetic appearance of the flue.

The smooth exterior line will complement modern heating appliances.

Applications

HT-S is designed for high temperature applications in the domestic and commercial market for gas, oil, solid and multi-fuel installations where appliances burn with flue gas temperatures of up to 450°C under continuous firing. It is soot fire resistant.

Product Designation and Testing

HT-S was type tested to the specific requirements of BS EN 1856-1:2003 and the general requirements of BS EN 1443:2003 and complied with all relevant clauses.

BSRIA Test report no. 55693/1



HT-S product designations

Product Type	Designation
HT-S	EN 1856-1 T450 N1 D VmL50050 G(50)
HT-S	EN 1856-1 T200 N1 D VmL50050 O(30)
HT-S	EN 1856-1 T200 P1 W VmL50050 O(30)

Test	Duration	Temp (°C)
Heat Stress Test 1	Until equilibrium temperatures are attained on test chimney accessory	550
High Temperature Thermal Shock Test	30 minutes at temp	1000
Heat Stress Test 2	Until equilibrium temperatures are attained on test chimney accessory	550

BS 476 :

HT-S has a 4 hour fire rating for stability and integrity. Please see separate product details and instructions. BS 476 four hour fire rating, tested at BRE, report no. 215945, copies available on request.

Size Range

Available in 130mm (5"), 150mm (6"), 180mm (7"), 200mm (8"), (Refer to H.T. Plus for the larger diameter).

Colours

All products can be stove enamelled or powder coated to any BS or RAL colour code.

General Notes

- An increase in fuel consumption, smoke in the building, evidence of sooting, difficulty in lighting, and staining around the appliance casing generally indicates a problem either with the appliance or a blockage in the system may have occurred.
- Do not use cleaning chemicals on the flue.
- Do not block or obstruct flue outlets or chimneys.
- Do not cover an appliance.
- Running appliances on constant low heat produces an increased level of condensation and may shorten the life of the product.
- Burning low grade fuels can shorten the life of the product. Any personnel installing or carrying out work or maintenance on appliances and flues must be suitably qualified and competent to do so.
- After installation the chimney should be inspected to determine the frequency of sweeping required.
- When carrying out smoke tests/spillage tests, consideration should be given to fans, draughts and combinations of the two which may affect the results of the test.

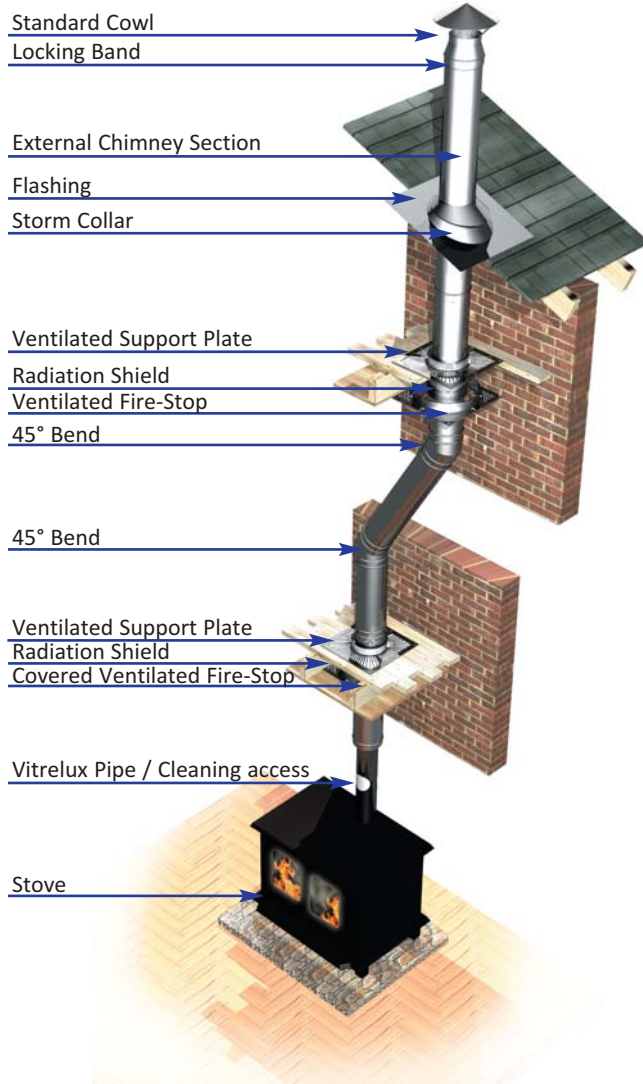
Installation Guidelines

For detailed installation guidelines please refer to the following documents:

HT-S Technical Information and Installation Instructions
 HETAS - Heating Equipment Testing and Approval Scheme
 NACS - National Association of Chimney Sweeps
 Building Regulations
 Planning Office
 BS 7566 - BS 5440 - BS 5854 - BS EN 12391
 Appliance Manufacturer's Operating and Maintenance Instructions
 Termination Heights:

- Up to 60kW - Building Regulations Document J
- Up to 150kW - BS 6644
- Over 150Kw - Clean Air Act

Domestic Multifuel Stove



- 1 The chimney should be installed with a minimum of horizontal runs and offsets. Where possible 15° or 30° elbows should be used, but 45° elbows can be used if necessary. For solid fuel or oil fired appliances **the distance between the bends should not exceed 20% of the vertical height of the chimney.** If the appliance is gas fired the distance between bends should not exceed half the vertical height of the chimney.
- 2 For appliances requiring the T450 and Soot Fire Resistance Classification, 50mm minimum clearance must be maintained from combustable materials, and where flues penetrate floors use the special ventilated fire stop and support plates. For appliances only requiring T200 classification, 30mm minimum clearance must be maintained from combustable material. Please refer to the HT-S Installation Instructions.
- 3 The chimney diameter should never be reduced to less than the diameter specified by the appliance manufacturer, in some cases this may involve an increase in diameter from the appliance spigot.
- 4 Ensure that adequate air is available for combustion. Refer to Building Regulations Approved Document J.
- 5 Ensure chimney termination has adequate clearance from the roof of the building. Do not allow products of combustion to be discharged where they can enter an opening window or ventilation inlet.
- 6 It's good practice to install a minimum vertical riser of 600mm on to an appliance before fitting a bend. If connecting to a draught diverter, a vertical riser of at least 600mm must be installed immediately above the diverter, or as recommended by the appliance manufacturer.
- 7 The chimney should be adequately supported. A full range of support brackets are available. We recommend no more than 6m vertical rise between load bearing support brackets. Lateral support brackets should also be installed at 3m intervals or 2m if exposed (vertical riser), and 1.5m intervals (incline/horizontal).
- 8 Provisions for inspection/sweeping must be made. Inspection lengths are available for this purpose.
- 9 Joints within a floor, ceiling or wall construction are prohibited. Chimney components shall not be modified. Chimneys penetrating walls shall be sleeved/shielded and weather proofed if though external walls. Where required, lightning protection of the chimney shall be installed in accordance with EN 61024-1. Fire stops, spacers and ceiling supports shall be installed as specified in these instructions.
- 10 Where there is a risk of combustibles being placed next to the chimney, the minimum distances to combustibles must always be maintained either by a permanent enclosure or shield.
- 11 Weather proofing where chimneys penetrates roofs shall be in accordance with HT-S Installation Instructions.
- 12 A variety of terminals are available for all applications. Chimneys in exposed locations can benefit from Anti Down Draught, 'H' or Roto Cows. Top Stubs are recommended for use on solid fuel appliances, drain points can be used to over come the problem of rain entering the open terminal. The use of mesh cowls should be avoided on solid fuel appliances as they need regular inspection and cleaning to avoid sooting up.
- 13 The finished installation shall have a chimney plate.
- 14 On completion of the installation it should be commissioned in line with requirements of EN 12391 including a smoke test. If there are any leaks or significant spillage, the fault must be rectified before the appliance is used. Provisions must be made for draining condensate when required.

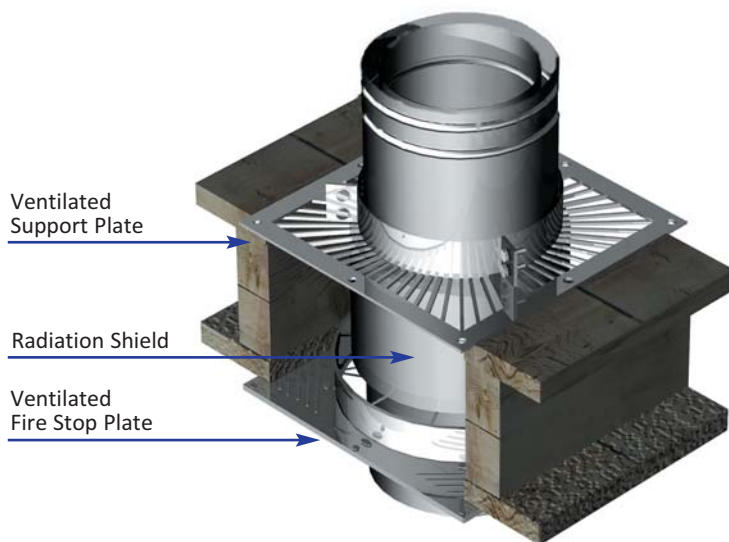
The above notes are an outline of only some of the aspects of good chimney installation practice. Please refer to the documents listed inside the front cover for further guidance.

For HT-S installations to comply with the requirements of BS EN 1856-1, one of the following combinations must be installed where systems penetrate combustible floors. The combination chosen depends on A) the operating temperature, and B) whether load bearing support is required at that level. For the T450 G50 system each of the two combinations including ventilated top and bottom plates, which allow the compartment between the two floors to be sufficiently ventilated ensuring joist temperatures are kept at a minimum.

Components Required to meet BS EN 1856-1

Support requirements	T450 G50 System	T200 O30
Load-Bearing Systems	Ventilated Support Plate Radiation Shield Ventilated Fire Stop Plate C/W Fire Sealing Collar	Fire Stop Plate Optional Radiation Shield Support Plate C/W Support Collar
Non Load-Bearing System	Non Supporting Ventilated Top Plate Radiation Shield Ventilated Fire Stop Plate C/W Fire Sealing Collar	Fire Stop Plate Optional Radiation Shield Fire Stop Plate

For T200 O30 systems the standard fire stop plates and support plates can be used, which give 50mm clearance to combustibles, if space is tight special items can be manufactured to order.

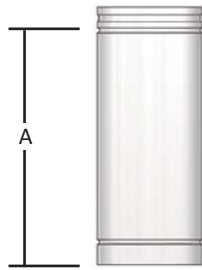


Box Section Dimensions

Code	Internal / External Diameter (mm)	Distance Between Joists (Flue OD + 100mm)	Ventilated Non-Support/Support and Firestop Plates	Joist Shield Diameter (Flue OD + 71)
05	130/178	278	346	247
06	150/203	303	373	274
07	180/229	329	399	296
08	200/254	354	424	325
10	250/305	405	475	376
12	300/356	456	525	426
14	355/406	506	576	477

Warranty

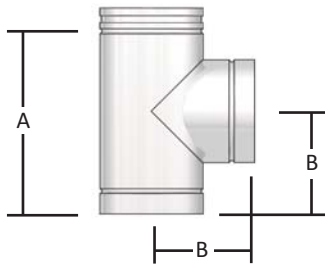
Midtherm Flue Systems Limited offer a 10 year Warranty for HT-S twin wall flue against defects due to faulty manufacture or defective materials, provided that the product is used only for the intended purpose, is sized, designed, and installed correctly for the appliance and route, is used only with suitable fuels, and is properly maintained. All installations for which the Warranty is to apply should be registered with Midtherm Flue Systems Limited. Please see our leaflet "10 Year Warranty - HT-S" for full details, which is available on request.



Lengths*

Length	Installed Length (mm)	Item Code
1000mm Length*	960	01
1500mm Length*	1460	02
500mm Length*	460	03
300mm Length*	260	34
320-520 Adjustable*	320-520	04
520-920 Adjustable*	520-920	05

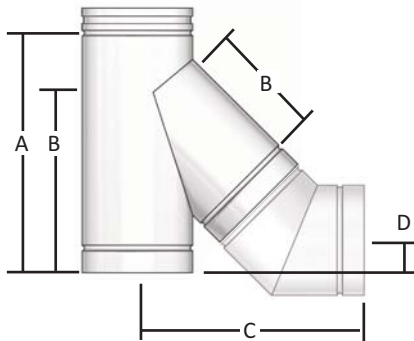
Starter lengths available in 1000mm and 500mm, they come with 316 1mm inner liner which allows it to be connected direct to a multi-fuel or wood burning appliance when used with the correct appliance connector.
Please ask for more details.



90° Tee*

Item Code 06

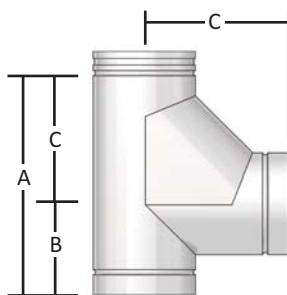
Diameter Code	05	06	07	08	10	12	14
Internal Dia	130	150	180	200	250	300	355
A	328	354	378	404	455	506	556
B	164	177	189	202	227	253	278



45° Tee*

Item Code 07

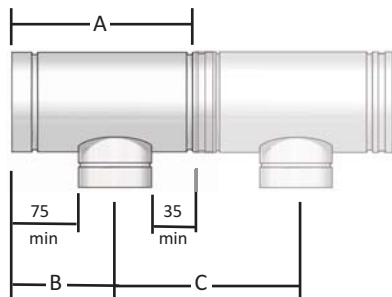
Diameter Code	05	06	07	08	10	12	14
Internal Dia	130	150	180	200	250	300	355
A	403	438	473	510	582	652	723
B	290	320	342	382	444	505	566
C	368	398	422	460	521	583	644
D	34	39	42	50	61	71	82



90° Boot Tee*

Item Code 37

Diameter Code	05	06	07	08	10	12	14
Internal Dia	130	150	180	200	250	300	355
A	428	453	478	504	555	606	656
B	164	176	189	202	228	253	278
C	264	277	289	302	327	353	378



90° Modular Tee*

Item Code 11

Dimensions to suit boiler positions



Tee Cap*

Item Code 08



Tee Cap with Drain*

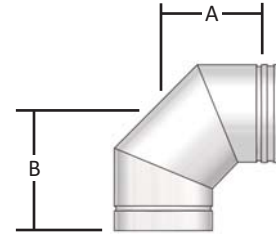
Item Code 08a

Used to close off an unused opening and can be used for cleaning access. Also available with 1" BSP drain point to allow the removal of condensate at the bottom of a large run.

90° Elbow For Gas and Oil Fired Application Only.

Item Code 09

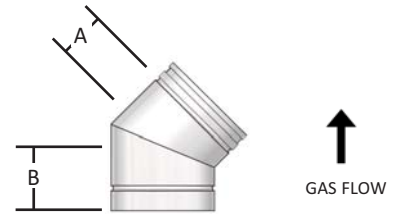
Diameter Code	05	06	07	08	10	12	14
Internal Dia	130	150	180	200	250	300	355
A	170	183	195	208	233	259	284
B	210	223	235	248	273	299	324



45° Elbow*

Item Code 10

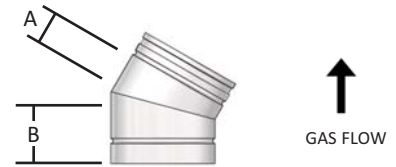
Diameter Code	05	06	07	08	10	12	14
Internal Dia	130	150	180	200	250	300	355
A	72	77	82	88	98	109	119
B	112	117	122	128	138	149	159



30° Elbow*

Item Code 10a

Diameter Code	05	06	07	08	10	12	14
Internal Dia	130	150	180	200	250	300	355
A	59	62	66	69	76	83	89
B	99	102	106	109	116	123	129



15° Elbow*

Item Code 10b

Diameter Code	05	06	07	08	10	12	14
Internal Dia	130	150	180	200	250	300	355
A	46	48	50	52	55	58	62
B	86	88	90	92	95	98	102

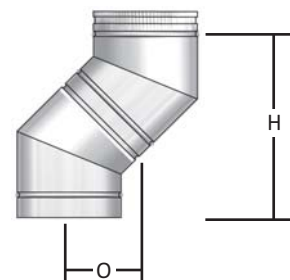


Offset Dimensions for Elbows

Internal Dia							
130	150	180	200	250	300	355	

Offset (O)	15°	34	35	36	37	39	40	42
	30°	79	82	86	89	96	103	109
	45°	130	137	144	153	167	182	197

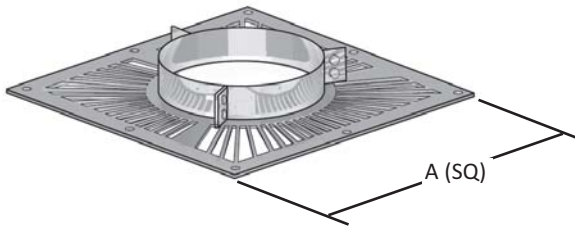
Height (H)	15°	260	267	275	283	295	307	322
	30°	295	306	321	332	358	384	407
	45°	314	331	348	369	403	440	475



*Inclusive of Locking Bands

Ventilated Support Plate

Item Code 40



Diameter Code	05	06	07	08	10	12	14
Internal Dia	130	150	180	200	250	300	355
A	346	373	399	424	475	525	576

The load bearing Ventilated Support Plate is supplied complete with a support collar and is for use where the flue system penetrates combustible floors. A load bearing support plate with collar must be positioned every six meters.

Radiation Shield

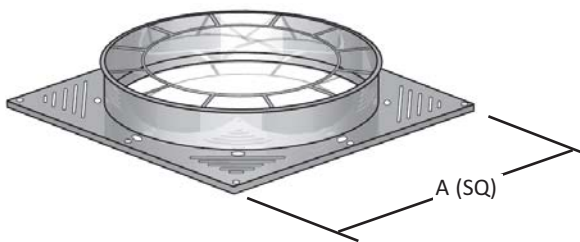
Item Code 41



The adjustable Radiation Shield can be extended to suit the joist height and is set at a diameter to fit in between the flue outer casing and the joist box. (Length adjustable to suit joist height from 150mm to 250mm when using ventilated FireStop C/W Fire Sealing Collar.)

Ventilated Firestop C/W Fire Sealing Collar

Item Code 42

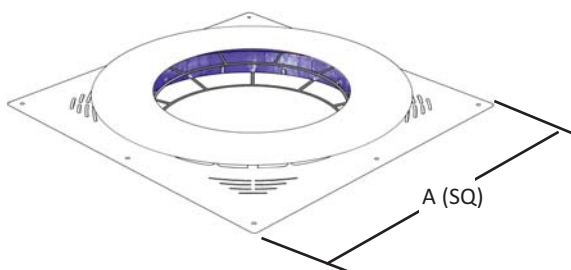


Diameter Code	05	06	07	08	10	12	14
Internal Dia	130	150	180	200	250	300	355
A	346	373	399	424	475	525	576

The collar attached to the plate houses and supports strips of material that expand when the activation temperature is exceeded. Once the material has expanded to the flue outer casing, the assembly maintains the fire resistance of the structure through which the flue passes. The Ventilated Fire Stop C/W Fire Sealing Collar is designed to meet requirements of The Building Regulations 2000 Approved Document B and has been tested to comply with the requirements of BS EN 1856-1. (Report WARRES No. 128942.)

Covered Ventilated Firestop C/W Fire Sealing Collar

Item Code 42a

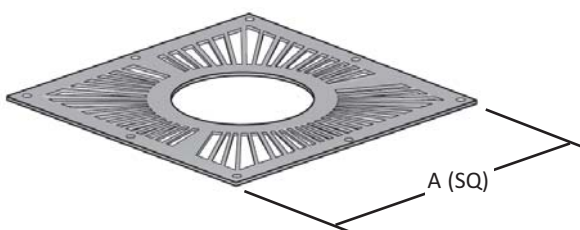


Diameter Code	05	06	07	08	10	12	14
Internal Dia	130	150	180	200	250	300	355
A	346	373	399	424	475	525	576

Comprises a ventilated fire stop plate c/w fire sealing collar plus a covered ring to provide a more aesthetic solution in the room where the appliance is located. This covered plate is not suitable for use where the cover would be located in an enclosure as this would affect the level of ventilation for the chimney. Testing for the Covered Ventilated Fire Stop Plate assembly is covered by the original Warrington Fire Research Center (Report BS476-20 No. 128942) and also by further testing at BSRIA to EN 1856-1 (Report No. 54522/2).
(Assembly shown upside down for illustration purposes only.)

Non Supporting Ventilated Top Plate

Item Code 43



Diameter Code	05	06	07	08	10	12	14
Internal Dia	130	150	180	200	250	300	355
A	346	373	399	424	475	525	576

The non-supporting ventilated top plate is for use where the flue system penetrates floors, but no load bearing support is required.

Termination / Anchor Plate

Item Code 19

For connecting from a brick chimney or Firechest to HT-S. (Base Plate Dimensions = O/D +150mm Square)



Locking Bands

Used to complete and secure joints.

Item Code 33



TW-SW Adaptor

For connecting to a single wall chimney liner.

Item Code 28



Structural Locking Bands

Structural Locking Bands are to be used when extra stability is required.

Item Code 33a



Appliance Connector*

Item Code 29

Code	05	06	07	08	10	12	14
Internal Dia	130	150	180	200	250	300	355
Connector OD (mm)	123	150	175	200	250	300	350

HT-S appliance connector is designed to fit into SW316 1mm or Vitrelux product; or to fit into an imperial size boiler spigot. **Alternative sizes can be manufactured on request.** Also available in 316 1mm for wood burning and multi-fuel appliances. (Installed length assumed as 100mm) **Reducing Appliance Connector also available,** dimensions available on request.



Rafter Support Bracket

The Rafter Support Bracket maintains 50mm clearance from combustible materials and provides lateral stability.

Item Code 36



Fire Stop Plate

For use where flue system penetrates a wall or ceiling. Not suitable for T450 applications. In case of use on T450 systems **Trim Plates are available on request.** Split and solid Trim Plates available to suit standard flue installation angles

Item Code 30



Silicone Sealant

Available in 310 ml tubes. Suitable for temperatures of up to 200°C See price list 39.



Guy Wire Kit

Kit Comprises of 30m of 3mm wire, 12 bulldog grips, 3 strainers and 6 thimbles. For use with the Guy Wire Bracket.

Item Code 31



Plugged Test Point*

Used to provide easy access for testing. Test Points must be specified as a length c/w Test Point to allow for installation at the manufacturing stage, as these cannot be retro-fitted to an existing length. Please specify BSP required.



(Safe Working Load = 100 kilos per wire)

Draught Stabilizer

To be used in conjunction with a 90° Tee and must be fitted in a Tee Cap, S/S Stabilizers require a special appliance connector to fit Tee. See price list 27 for S/S Stabilisers.

Item Code 32

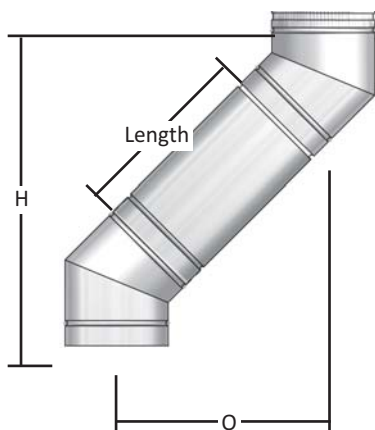


Access Doors (made to order)*

Used to provide easy access for cleaning and inspection. The twin wall Access Door must be specified as a length c/w Access Door to allow for installation at the manufacturing stage, as these cannot be retro-fitted to an existing length. (Smallest Door Size = 200 x 300)

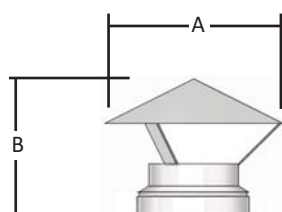


*Inclusive of Locking Bands



Length	Elbow	Dim	Internal Dia			
			130	150	180	200
300mm (260)	15°	O	101	102	104	105
		H	511	519	526	534
	30°	O	209	212	216	219
		H	520	531	546	557
	45°	O	314	321	328	337
		H	498	515	532	553
500mm (460)	15°	O	153	154	155	156
		H	704	712	720	727
	30°	O	309	312	316	319
		H	693	704	719	731
	45°	O	455	462	470	478
		H	639	656	674	694
1000mm	15°	O	283	284	285	286
		H	1187	1195	1203	1210
	30°	O	559	562	566	569
		H	1126	1137	1152	1164
	45°	O	809	816	823	832
		H	993	1010	1027	1048
1500mm (1460)	15°	O	412	413	414	415
		H	1670	1678	1685	1693
	30°	O	809	812	816	819
		H	1559	1570	1585	1597
	45°	O	1162	1170	1177	1185
		H	1346	1364	1381	1401

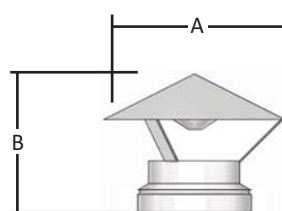
Terminals



Standard Cowl

Item Code 16

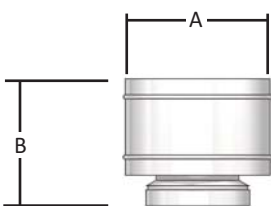
Diameter Code	05	06	07	08	10	12	14
Internal Dia	130	150	180	200	250	300	355
A	260	300	360	400	500	600	700
B	235	245	260	270	295	320	345



Double Inverted (DI) Cowl

Item Code 17

Diameter Code	05	06	07	08	10	12	14
Internal Dia	130	150	180	200	250	300	355
A	250	300	350	400	500	600	700
B	235	245	260	270	295	320	345



Swedish / Universal Cowl

Item Code 18

Diameter Code	05	06	07	08	10	12	14
Internal Dia	130	150	180	200	250	300	355
A	240	278	317	354	431	507	584
B	350	350	350	350	375	425	450
Fitted with Bird Mesh for use on Gas Fired Appliances only.							



Top Stub

Item Code 20

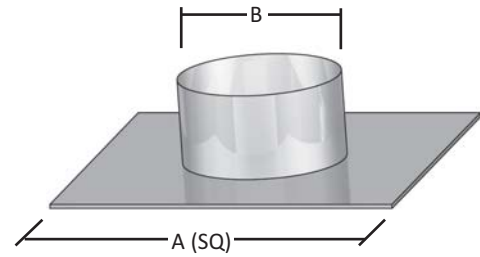
Vertical Discharge Terminal. Available with Bird Mesh.

Please see price list No. 28 for AD Cowls and H Cowls. SW 316 cowls compliment the HT-S range for use on solid fuel appliances. SW 304 and SW 430 versions are also available (use where weather conditions are turbulent).

Flat Roof Plate (Aluminium)

Item Code 12

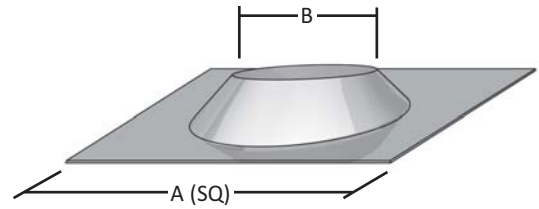
Diameter Code	05	06	07	08	10	12	14
Internal Dia	130	150	180	200	250	300	355
A	456	456	610	610	610	650	700
B	203	228	254	280	330	381	432



Adjustable Roof Plate (Aluminium)

Item Code 13

Diameter Code	05	06	07	08	10	12	14
Internal Dia	130	150	180	200	250	300	355
A	610	610	610	610	915	915	915
B	203	228	254	280	330	381	432



Storm Collar (Cravat Type)

Item Code 14

Standard Produced in Aluminium
Also Available to order in stainless steel to comply with BS 4543.



Storm Collar (Washer Type)

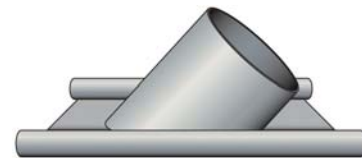
Item Code 15

Standard Produced in Aluminium
Also Available to order in stainless steel to comply with BS 4543.



Lead Flashings

A wide range of standard and made to order lead flashings are available, details available on request. See price list 21.



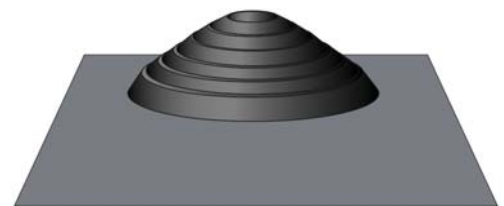
Flexible Pipe Flashings

Silicone (Red - High Temperature) for -60 to +240°C
EPDM (Black - Low Temperature) for -40 to +115°C
See price list 40 for prices and sizes.

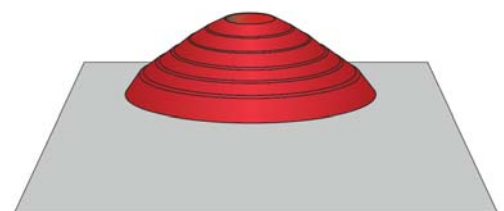


Silicone
High Temperature

EPDM
Low Temperature



Lead Base Flashings



Aluminium Base Flashings

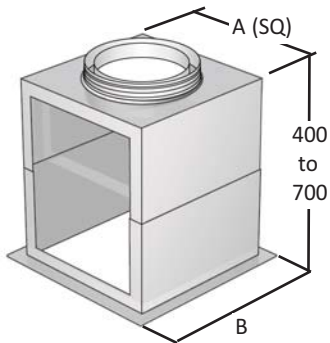
Lead Base Flashings and Aluminium Base Flashings available in Silicone High Temperature and EPDM Low Temperature. See price list 40 for prices and sizes.



Split Clip Band

Item Code 21

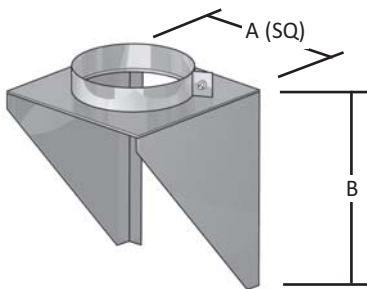
Used to support a horizontal flue run.



Telescopic Base Support

Item Code 22

Diameter Code	05	06	07	08	10	12	14
Internal Dia	130	150	180	200	250	300	355
A	268	293	318	344	395	446	496
B	318	343	368	394	445	496	546

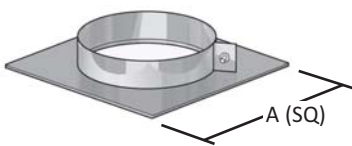


Intermediate Wall Support Bracket

Item Code 23

Diameter Code	05	06	07	08	10	12	14
Internal Dia	130	150	180	200	250	300	355
A	268	293	318	344	395	446	496
B	300	350	400	440	515	600	700

For use as a load bearing intermediate support from a wall. Supplied complete with a support plate and collar.



Support Plate

Item Code 24

Diameter Code	05	06	07	08	10	12	14
Internal Dia	130	150	180	200	250	300	355
A	268	293	318	344	395	446	496

For use where the flue system penetrates a non-combustible floor. Also acts as a firestop spacer. Supplied complete with support collar.

NOTE: Intermediate Wall Supports and Support Plates are supplied in stainless steel as standard. If galvanised brackets are acceptable please specify as MT product codes. Standard brackets are designed to provide **50mm** clearance from wall.



Guy Wire Bracket

Item Code 25

Provides 3 fixing points for use with Guy Wires to enable lateral support of a vertical flue.



Wall Band

Item Code 26

Diameter Code	05	06	07	08	10	12	14
Internal Dia	130	150	180	200	250	300	355
A	138	141	172	187	219	305	360

Used to provide lateral support for a vertical flue. Standard gives **50mm** clearance from wall



Adjustable Wall Bracket

Item Code 27

Adjustable Wall Bracket Long

Item Code 27a

Diameter Code	05	06	07	08	10	12	14
Internal Dia	130	150	180	200	250	300	355
A	138	141	172	187	219	305	360

Used to provide lateral support for a vertical flue. Standard gives **50 - 100mm** adjustable clearance from wall, Long gives **100 - 300mm** adjustable clearance from wall



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