



DEC FLEX

FLEXIBLE CHIMNEY TUBE LINING

PRODUCT INFORMATION

If you decide using a flexible system, please be sure you select the correct type of chimney lining. The diameter is stipulated by the total length, including the connections and course of the tube lining, the capacity, the type of appliance and the fuel. The choice of system is depending of the used appliance and the national standards and building regulations.

The **DEC FLEX** tube lining material is a universal system with CE standard and suitable for over- and under pressure applications within wet or dry circumstances.

The **DEC FLEX** range can be divided into three main groups:

- Single-walled products.
- Double-walled products. (inside smooth)
- Accessories

SPECIFICATIONS	DEC FLEX SWE	DEC FLEX SW	DEC FLEX TW
Article code:	D1BYE{Ø}L	D2BY{Ø}L	D22BY{Ø}L
Material ¹ :	Austenitic stainless steel (AISI 316L / DIN 1.4435)	Austenitic stainless steel (AISI 316Ti / DIN 1.4571)	Austenitic stainless steel (AISI 316Ti / DIN 1.4571)
Application:	In situations where no special provisions for condensation are required		
Wall properties outside:	Corrugated	Corrugated	Corrugated
Wall properties inside:	Corrugated	Corrugated	Smooth

¹Material is in all the above Cold Rolled Bright Annealed and tested according to EN 10204 3.1B

PRODUCTION PROCESS

The production process is certified according to:

- EN-ISO9001: 2015
- EN 1856-2 with Factory Production Control (FPC)

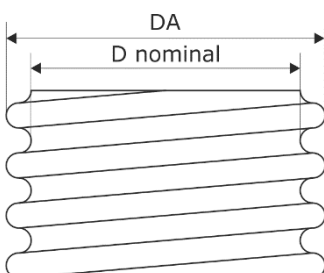
All flexible tubes have been marked at least every three meters with:

- product name
- production date with order number
- nominal measurements
- batch numbers and
- hallmark(s)
- a line mark every meter

PACKAGING

The flexible tubing comes standard in easy rolls covered with polyethylene elastic foil to minimize packaging waste. As extra protection a box or protection foil can be used.

INNER/OUTER DIMENSIONS



$$DA = D \text{ nominal} + 7 \text{ mm}$$

LIABILITY:

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DIAMETER		LOAD	D2BY			
ø nom [mm]	nett [kw]	wood min. max. l in mtr	oil min. max. l in mtr	zeta	bending radius min (mm)	kg/m
80	5	5 - 5	3 - 5	0.72	240	0.50
	10	X	X	0.72	240	0.50
90	5	3 - 6	2 - 5	0.61	270	0.56
	10	X	5	0.61	270	0.56
100	5	3 - 5	2 - 4	0.53	300	0.62
	10	6 - 9	3 - 7	0.53	300	0.62
110	7.5	3 - 7	2 - 6	0.47	330	0.68
	15	11 - 12	4 - 10	0.47	330	0.68
120	7.5	2 - 7	2 - 6	0.41	360	0.74
	15	6 - 11	3 - 9	0.41	360	0.74
125	7.5	2 - 6	2 - 5	0.39	375	0.77
	15	5 - 11	3 - 9	0.39	375	0.77
130	10	3 - 8	2 - 7	0.37	390	0.81
	20	7 - 13	4 - 11	0.37	390	0.81
140	15	3 - 11	2 - 9	0.34	420	0.87
	30	16 - 18	5 - 15	0.34	420	0.87
150	15	2 - 10	2 - 9	0.31	450	0.93
	30	7 - 17	3 - 14	0.31	450	0.93
160	15	2 - 10	2 - 10	0.28	480	0.99
	30	5 - 17	3 - 14	0.28	480	0.99
180	20	2 - 12	2 - 10	0.24	540	1.11
	40	6 - 20	3 - 16	0.24	540	1.11
200	25	2 - 13	2 - 11	0.21	600	1.24
	50	5 - 22	3 - 18	0.21	600	1.24
225	35	2 - 16	2 - 14	0.17	675	1.39
	70	6 - 27	3 - 23	0.17	675	1.39
250	40	2 - 17	2 - 14	0.16	750	1.55
	80	5 - 29	3 - 24	0.16	750	1.55
300	55	2 - 20	2 - 17	0.12	900	1.86
	110	4 - 34	3 - 28	0.12	900	1.86
350	80	2 - 25	2 - 21	0.10	1050	2.17
	160	5 - 42	3 - 35	0.10	1050	2.17

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DIAMETER		LOAD		D22BY		
ø nom [mm]	nett [kw]	wood min. max. l in mtr	oil min. max. l in mtr	zeta	bending radius min (mm)	kg/m
100	5	2 - 6	2 - 5	0.38	300	0.93
	10	5 - 10	3 - 8	0.38	300	0.93
110	7.5	3 - 8	2 - 7	0.34	330	1.02
	15	7 - 13	4 - 11	0.34	330	1.02
120	7.5	2 - 8	2 - 6	0.30	360	1.11
	15	5 - 13	3 - 11	0.30	360	1.11
125	7.5	2 - 7	2 - 6	0.29	375	1.16
	15	4 - 12	3 - 11	0.29	375	1.16
130	10	2 - 9	2 - 8	0.27	390	1.21
	20	5 - 15	3 - 13	0.27	390	1.21
140	15	3 - 12	2 - 10	0.25	420	1.30
	30	9 - 20	4 - 17	0.25	420	1.30
150	15	2 - 12	2 - 10	0.23	450	1.39
	30	6 - 19	3 - 16	0.23	450	1.39
160	15	2 - 13	2 - 11	0.21	480	1.48
	30	4 - 19	3 - 16	0.21	480	1.48
180	20	2 - 13	2 - 11	0.18	540	1.67
	40	5 - 22	3 - 19	0.18	540	1.67
200	25	2 - 15	2 - 13	0.16	600	1.85
	50	5 - 25	3 - 21	0.16	600	1.85
225	35	2 - 18	2 - 15	0.14	675	2.00
	70	5 - 30	3 - 26	0.14	675	2.00
250	40	2 - 19	2 - 17	0.12	750	2.32
	80	5 - 32	3 - 28	0.12	750	2.32
300	55	2 - 23	2 - 20	0.09	900	2.78
	110	4 - 38	3 - 33	0.09	900	2.78
350	80	2 - 29	2 - 24	0.08	1050	3.29
	160	4 - 47	3 - 40	0.08	1050	3.29

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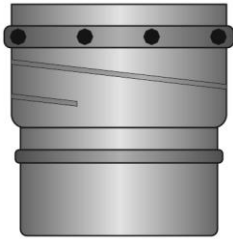
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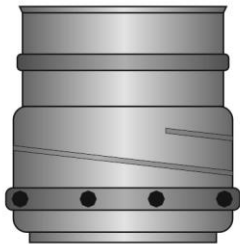
DEC FLEX

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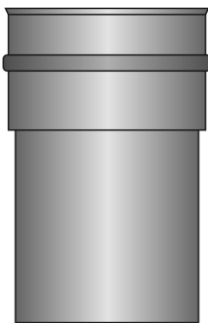
ADAP1-PW{Ø} CONNECTING PIECE/FLEX

Material	Stainless steel 316L/DIN 1.4404
Material thickness	0.5 mm
Available diameters	80, 90, 100, 113, 125, 130, 150, 180 and 200 mm



ADAP2-PW{Ø} FLEX/CONNECTING PIECE

Material	Stainless steel 316L/DIN 1.4404
Material thickness	0.5 mm
Available diameters	80, 90, 100, 113, 125, 130, 150, 180 and 200 mm



ADAP2{Ø} FLEX/CONNECTING PIECE

Material	Stainless steel 316L/DIN 1.4404
Material thickness	0.5 mm
Available diameters	80, 90, 100, 113, 125, 130, 150, 180, 200, 225, 250 and 300 mm

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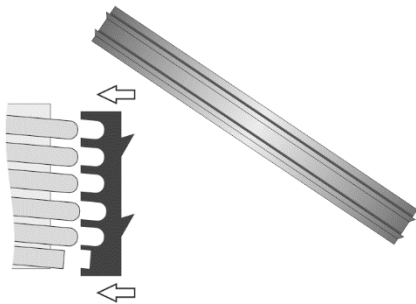


HT KIT

SEALANT FOR ADAP-PW

Material
Material temperature
Packaging

Silicone rubber
combustion gases 200°C
310 ml tube

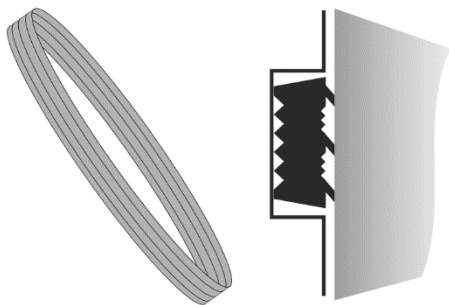


ADAS1{Ø}

SEALING RING FOR ADAP1R(G)

Material
Material temperature
Available diameters

Silicone rubber
combustion gases 200°C
80, 90, 100, 110, 130 and 150 mm



ADAS3{Ø}

SEALING RING FOR ADAP2PW FEMALE SIDE

Material
Material temperature
Available diameters

Silicone rubber
combustion gases 200°C
80, 100, 113, 130, 150, 180 and 200 mm

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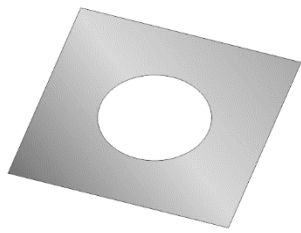
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FLEXIBLE CHIMNEY TUBE LINING



ADAP3{Ø}

COVER PLATE FOR ADAP2

Material

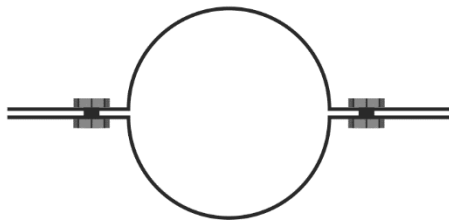
Stainless steel 316L/DIN 1.4404

Material thickness

0.5 mm

Available diameters

80, 90, 100, 125, 130, 150, 180, 200, 225, 250 and 300 mm



FLS316Ti{Ø}

MOUNTING BRACKET

Material

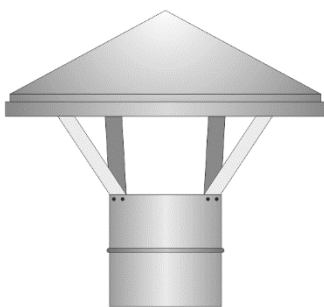
Stainless steel 316L/DIN 1.4571

Material thickness

2.0 mm

Available diameters

80, 90, 100, 125, 130, 150, 180, 200, 250 and 300 mm



FLRC{Ø}

RAIN CAP

Material

Stainless steel 316L/DIN 1.4404

Material thickness

0.6 mm

Available diameters

80, 100, 110, 130, 150, 180 and 200 mm

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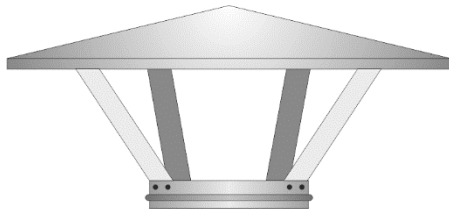
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FLEXIBLE CHIMNEY TUBE LINING



FLRC1{Ø}

RAIN CAP WITH CLAMP

Material

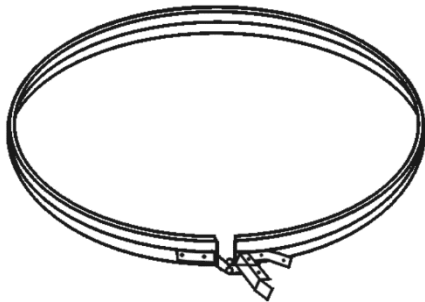
Stainless steel 316L/DIN 1.4404

Material thickness

0.6 mm

Available diameters

80, 100, 110, 130, 150, 180 and 200 mm



FLCR1{Ø}

CLAMPING BRACKET

Material

Stainless steel 316L/DIN 1.4401

Material thickness

0.6 mm

Available diameters

80, 100, 110, 130, 150, 180 and 200 mm

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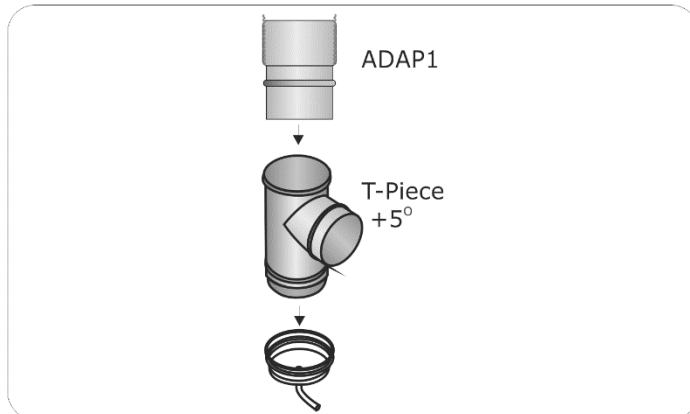
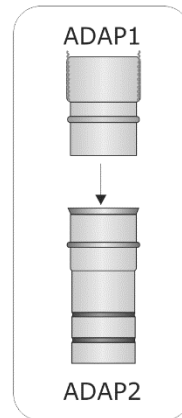
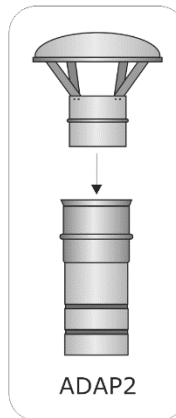
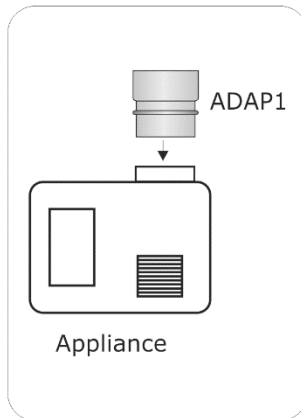
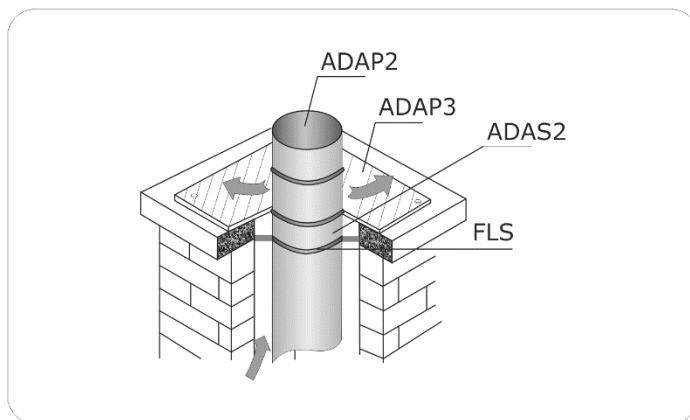
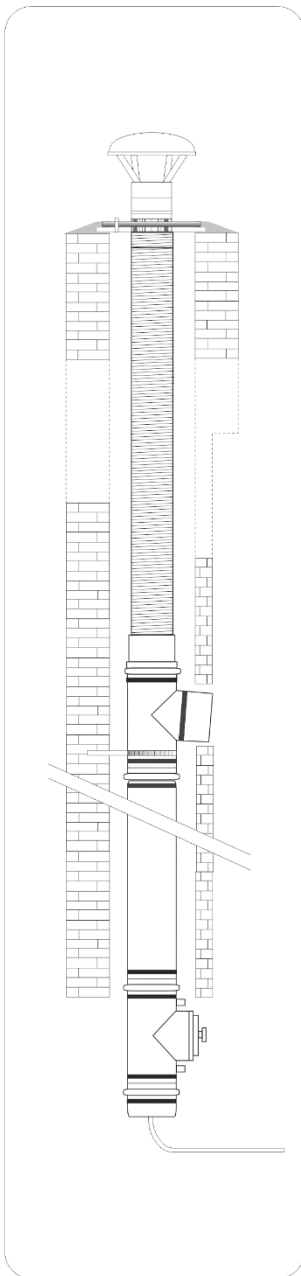


DECFLEX

FLEXIBLE CHIMNEY TUBE LINING

SAMPLE CONSTRUCTIONS

This sample document is an example for purposes of illustration only and is intended to serve only as a general resource, not as a form or recommendation. The manufacturer accepts no liability for the ultimate construction.



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DECFLEX

INSTALLATION MANUAL FOR
DECFLEX FLEXIBLE CHIMNEY TUBE LINING

CONTENTS

- Manufacturer
- General
- Products
- Applications
- Preparation
- Length and diameter

MANUFACTURER

Dutch Environment Corporation® B.V.

- Certified in accordance with **NEN-ISO 9001:2000**
- Certified in accordance with **EN 1856-2 (CE)**

PRODUCTS

The **DECFLEX** range can be divided into three main groups:

- Single-walled products
- Twin-walled products with a smooth inside
- Accessories

A range of accessories is available for a correct assembly in the flue, the exhaust hood assembly and for connecting the device. Please refer to the technical specifications for further details on these products.

APPLICATION

Flexible tube lining is applied in an existing chimney for discharging combustion gases. The flexible lining may not be seen as repairs to a chimney that is in a poor condition. The existing chimney must be in good condition and built in accordance with current standards and regulations.

Application of the lining will result into:

- A smaller diameter than the original channel;
- Protecting the original flue against the risks of condensation and affecting of the inside of the chimney;
- Improved gas tightness.

PLEASE NOTE:

DEC International accepts absolutely no liability for an injudicious or wrong assembly, nor for a wrongly chosen application of here defined products. Single-walled products may generally be used for exhausting flue gas from gas-fired appliances. The twin-walled products have a far smoother inside and therefore a lower resistance. These twin-walled products are suitable as chimney linings. Twin walls also have a longer lifespan. Arrows on the outside of the twin-walled tubing show the flow direction of combustion gases.

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INSTALLATION MANUAL FOR
DECFLEX FLEXIBLE CHIMNEY TUBE LINING

CE Marking EN 1856-2

REQUIREMENTS FOR METAL CHIMNEYS- PART2: METAL LINERS AND CONNECTING FLUE PIPES

Above mentioned European Standard affects the complete **DECFLEX** range.

As from April 1, 2006 all flexible metal flue liners must comply with the European standard 1856-2 and bear the corresponding **CE-marking**. This standard is in force in all European countries, and replaces identical national standards. The advantage is more transparency for all parties: the chimney systems now are clearly marked with a classification that indicates for what purpose the product can be applied.

Regarding the installation the national building regulations remain in force.

All **DECFLEX** products comply with the European norm, and starting **August 1, 2005** the **DECFLEX** range will be marked **CE** with the corresponding designation.

From the **DECFLEX**-range, the complete **Declaration of Performance** and **FPC-certificates** are available upon request. For all additional information, please contact our sales department.

The declared maximum designations are:

DecflexTW - 316Ti EN1856-2 T200 - P1 - W -Vm - L50012 - O
 EN1856-2 T450 - N1 - D -Vm - L50012 - G

DecflexSW - 316Ti EN1856-2 T200 - P1 - W-Vm - L50012 - O
 EN1856-2 T450 - N1 - D -Vm - L50012 - G

DecflexSWE - 316L EN1856-2 T200 - P1 - W -Vm - L50012 - O
 EN1856-2 T450 - N1 - D -Vm - L50012 - G

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PREPARATION

Please read the following information before installation:

Do NOT use these products for halogen-contaminated exhaust gases!

Use the flexible tubing only as lining in an existing chimney flue for discharging combustion gases. Check that the chimney is not damaged or cracked as the structural strength could be reduced.

Establish that the required system is a negative or positive pressure system. Find out whether or not condensation may occur. Choose the quality of the materials and necessary components accordingly.

The flexible duct cannot be used horizontally. The maximum angle relative to the plumb line is 30° for heavy condensing appliances and 45° for moderately condensing appliances and dry systems.

Ensure the chimney has been carefully swept before installation. Residual deposits may affect the lining.

Check that the existing chimney complies with building regulations. Generally the existing chimney will discharge in a free-flow area with no need for a chimney aspirator. The installation of a rain cap is recommended. If necessary, please check **NEN 2757** or **NPR 2758** or the applicable norms of your country.

In dwellings with combustible roofing (e.g. thatched houses) the exhaust hood must be fitted with a spark catcher. Check the small print of your insurance policy.

Flexible linings with a diameter smaller than 120 mm may not be used for gas-fired appliances exceeding a nominal output of 60kW. Check with the appliance manufacturer that the use of a stainless steel flexible flue gas exhaust system is allowed.

LENGTH AND DIAMETER

When checking that the required length and diameter are in order, we make a distinction between:

- Overpressure systems for appliances fitted with a fan, and
- Underpressure systems for appliances running on natural discharge.

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OVERPRESSURE SYSTEM

$$\Delta p = (L \cdot \zeta_p + \zeta_v) \cdot \frac{1}{2} \cdot \rho \cdot v_{\text{nom}}^2$$

The loss of pressure is calculated with the above formula in which

L = Total length of the flexible lining [m]

ζ_p = Resistance factor (zeta). This is mentioned for the flexible tubes in the technical specifications

ζ_v = Resistance factor (zeta), if the exhaust system has a slope angle the zeta value must be increased as follows:

SLOPE ANGLE (2 CURVES)	ZETA INCREASE
30°	0.24
45°	0.36

ρ = Density of the combustion gases in [kg/m³];

v_{nom} = Velocity of the combustion gases in de nominal tube diameter [m/s].

To be calculated from the quantity of combustion gases to be discharged. For mounting the installation instruction of the appliance manufacturer should be consulted.

The calculated pressure loss of the diameter to be applied must be lower than the allowed pressure loss according to the installation instructions of the appliance.

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UNDERPRESSURE SYSTEM

Follow the directions by the appliance manufacturer for the lining diameter. In general the lining will need the same diameter as used for the appliance-connecting sleeve.

The proper operation of the appliance not only depends on the diameter but also on the length, both the minimum and the maximum length.

The following table shows the minimum and maximum exhaust lengths. These details are based on the following assumptions:

- An exhaust system with two 30° curves
- Necessary draw for proper operation is 5 Pa (including the exhaust entry resistance)
- CO₂ content of the flue gases is 8%
- Temperature of the flue gases is 200 °C

The allowed length depends on the exhaust system diameter and the load of the appliance. When knowing the length and the diameter one can also see which load can be applied. Of course one could also work out the right diameter once the length and the load are known.

The minimum length is needed for transporting the combustion gases. The draw must exceed the resistance of the exhaust system.

Condensation may occur when the tubing is too long. The lining itself may be condense water resistant, certainly if stainless steel 904L has been applied, but the proper operation of the appliance at the start may be adversely affected if combustion gases are cooling off too much. Using twin-walled lining can eliminate condensation problems; by insulating the cavity.

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DEC FLEX

INSTALLATION MANUAL FOR
DEC FLEX FLEXIBLE CHIMNEY TUBE LINING

MINIMUM AND MAXIMUM LENGTH IN METRES

DIAMETER [mm]	LOAD O.W. [Kw]	MINIMUM AND MAXIMUM LENGTH IN METRES			
		D2BY s.w./wood	D22BY t.w./wood	D2BY s.w./oil	D22BY t.w./oil
80	5	5 - 5	5 - 5	3 - 5	3 - 5
	10	X	X	X	8 - 9
90	5	3 - 6	3 - 7	2 - 5	2 - 5
	10	X	X	5	8
100	5	3 - 5	2 - 6	2 - 4	2 - 5
	10	6 - 9	5 - 10	3 - 7	3 - 8
110	7.5	3 - 7	3 - 8	2 - 6	2 - 7
	15	11 - 12	7 - 13	4 - 10	4 - 11
120	7.5	2 - 7	2 - 8	2 - 6	2 - 6
	15	6 - 11	5 - 13	3 - 9	3 - 11
125	7.5	2 - 6	2 - 7	2 - 5	2 - 6
	15	5 - 11	4 - 12	3 - 9	3 - 11
130	10	3 - 8	2 - 9	2 - 7	2 - 8
	20	7 - 13	5 - 15	4 - 11	3 - 13
140	15	3 - 11	3 - 12	2 - 9	2 - 10
	30	16 - 18	9 - 20	5 - 15	4 - 17
150	15	2 - 10	2 - 12	2 - 9	2 - 10
	30	7 - 17	6 - 19	3 - 14	3 - 16
160	15	2 - 10	2 - 13	2 - 10	2 - 11
	30	5 - 17	4 - 19	3 - 14	3 - 16
180	20	2 - 12	2 - 13	2 - 10	2 - 11
	40	6 - 20	5 - 22	3 - 16	3 - 19
200	25	2 - 13	2 - 15	2 - 11	2 - 13
	50	5 - 22	5 - 25	3 - 18	3 - 21
230	35	2 - 16	2 - 18	2 - 14	2 - 15
	70	6 - 27	5 - 30	3 - 23	3 - 26
250	40	2 - 17	2 - 19	2 - 14	2 - 17
	80	5 - 29	5 - 32	3 - 24	3 - 28
300	55	2 - 20	2 - 23	2 - 17	2 - 20
	110	4 - 34	4 - 38	3 - 28	3 - 33
350	80	2 - 25	2 - 29	2 - 21	2 - 24
	160	5 - 42	4 - 47	3 - 35	3 - 40

s.w = Single-walled

t.w. = Twin-walled

"x" in the tables stands for no dry chimney with sufficient capacity

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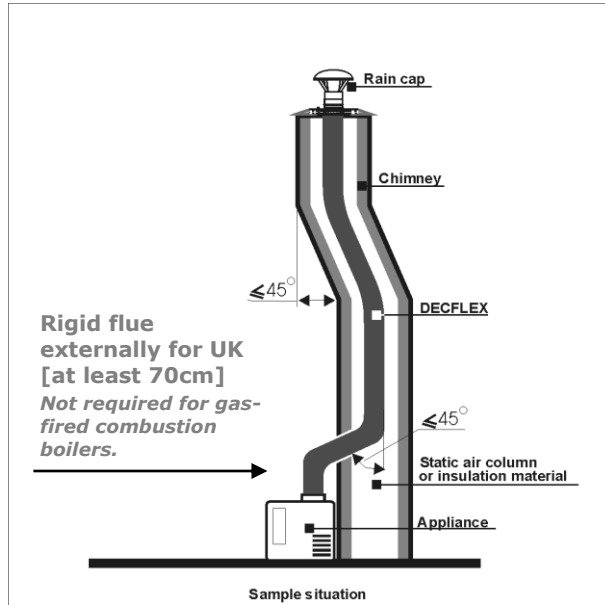
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DEC FLEX

ASSEMBLY INSTRUCTIONS FOR
DEC FLEX FLEXIBLE CHIMNEY TUBE LINING



TECHNICAL DATA

Nom. diameter inside (mm)	Ø 80	Ø 90	Ø 100	Ø 110	Ø 120	Ø 130	Ø 140	Ø 150
Diameter outside (mm)	Ø 87	Ø 97	Ø 107	Ø 117	Ø 127	Ø 137	Ø 147	Ø 157
Tolerance	-0, +1 % x Ø							
Wall thickness	0.12 mm							
Quality	AISI 316Ti/DIN 1.4435, AISI 316Ti/DIN 1.4571 & AISI 904L /DIN 1.4539							
Life expectancy	5 - 10 years							
Minimum bending radius	3 x diameter							
Maximum slope angle in relation to the plumb line	45° for moderately condensing appliances 30° for strongly condensing appliances							
Weight per metre (kg)	0.57	0.64	0.71	0.79	0.86	0.93	1.00	1.07
Design load N	250	250	300	300	300	300	300	300
Temperature resistance °C	200, 450							
Application	Negative- and Positive pressure							

Extra information: flexible stainless steel tubing system

- Apply only in existing flues.
- Product has a limited life span.
- Not suitable for discharging combustion gases containing halogen.

It is recommended to use the tubing in an existing channel with a minimum diameter of: outside diameter + 10 cm.

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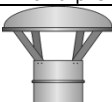
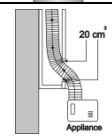
DEC FLEX

ASSEMBLY INSTRUCTIONS FOR DEC FLEX FLEXIBLE CHIMNEY TUBE LINING

Read these assembly instructions carefully before installation.

Follow the steps below in the right order for the correct installation of the flexible chimney tube lining. Personal protective gear, such as gloves and safety goggles for eye protection, must be worn at all times. **Watch out** for the far ends of the lining. These may be sharp and can spring back while unrolling, installing and finishing. Always keep your face at a safe distance.

EXAMPLE: Assembly instructions specific for ADAP(1&2)-PW

1.	Make sure the chimney flue has been thoroughly swept before installation, as remaining deposits may affect the lining.
2.	Remove the chimney neck (the brick-on-edge coping), making the flue freely accessible.
3.	Select the diameter for the flexible lining. Lower a wooden sweep cone ADAC through the entire channel to check for any objects that may obstruct the passage. The cone must easily pass through the channel. Apply a smaller diameter when any obstacles are encountered, provided that the resistance for the appliance to be connected does not become too high. The cavity between the chimney wall and the flexible lining must be at least 5 cm.
4.	The required amount of lining can be determined using the rope connecting to the cone. Cut the lining at the required length after installation is completed. The chimney flue must have a flexible lining out of one piece. The maximum slope angle is 45°.
5.	Wear working gloves and safety goggles once you start using the chimney tube lining; the edges of the lining can be sharp.
6.	Install the sweep cone using self-tappers to the flexible tube. Note: on double-walled linings the flow direction of flue gases is shown by arrows.
7.	Pull the lining through the channel from the top. One person pulls, while a second person guides the lining through the chimney opening. This is to avoid any damage to the lining while pulling. Pull the lining far enough to allow room for connecting to the appliance.
8.	The lining should somewhat stick out from the top of the channel, making the far end of the lining level with the top of the brick-on-edge coping after installation.
9.	Cut the lining to the correct length if necessary, using a right-angle grinder or a metal saw (figure A). Level any sharp edges and protrusions to avoid damage to the ring. The lining must not be butted or damaged. Ensure the far ends of the lining have been carefully finished at right angles.
10.	Screw the adapters on the ends (fig B + D) NOTE: ADAP1-PW is for the bottom side and ADAP2-PW is for the top side. Only for overpressure systems: Carefully inject the HT-Kit into the holes around the adapter, pay good attention that the chambers are well filled (between liner and adapter) by means of filling all holes one by one until you have been round (fig E). Before mounting the ADAP2-PW confirm you have slid the roof plate ADAP4 over the liner.
11.	Fit and fix the assembly bracket FLS around the lining. Clamp the FLS securely around the lining but ensure the lining remains round. Note the correct diameter of the bracket! (See figure C).
12.	Centre the far end of the lining with the FLS in the channel and secure the same in a layer of concrete (figure C). Re-build the brick-on-edge coping.
13.	Secure the roofing sheet onto the brick-on-edge coping after the concrete has set.
14.	If the cavity is not filled with an insulation material, such as vermiculite, it should be ventilated. This is possible by mounting a cover plate with a pre-fabricated opening of 5 cm ² in such a way that watering will be prevented.
15.	 Place the rain cap FLRC in the adaptor ADAP2-PW and fix the unit with a clamping bracket FLCR . See the technical specifications for available diameters. In the case of a thatched house it is recommended you first check your insurance policy conditions for a hood fitted with a spark catcher.
16.	 Check that the lining at the bottom of the chimney at the feed-through aperture cannot be damaged by the sharp edges of the chimney flue. If an air cavity is being used: make a (ring-shaped) opening at the passage through the chimney wall of at least 20 cm ² for ventilation in the cavity, provided that the slope angle is ≤ 45°. A rigid flue has to be used externally in the United Kingdom!
17.	In the installation space of the gas appliance the unprotected tubing may not exceed 20 x D _{nom} . Put the tubing in a vertical position when possible. The angle in relation to the plumb line may not exceed 45°. Always retain a distance of at least 50 mm to the wall. If necessary, use a wall bracket to prevent sagging of the lining (see technical specifications for the available sizes).
18.	Determine the required length of the lining, taking into account the height of the adapter (ADAP1-PW). If there is talk of overlength: work the sheathing finished defined as in point 9.
19.	For positive pressure systems one uses the Ht-Kit with the ADAP1-PW and for under pressure systems not.
20.	Put the adaptor in the connection point of the appliance.
21.	Attach an identification plate on the chimney in the installation area near the entry point of the lining, for the chimneysweeper and/or maintenance engineer to see that flexible lining has been used.

See the installation manual for detailed information on applying linings in chimney flues. This manual is available from **DEC International**® on request. **General: in practice, depending on the situation, other installation methods are also used. The lining manufacturer has no control over these methods.** However, various accessories are available to make the work easier, such as a T-piece and a condense drain. See the technical specification for available diameters and assembly options. **The Fluegas evacuation (and the air supply) always must satisfy to the installation regulations of the appliance manufacturer and to the National building regulations.**

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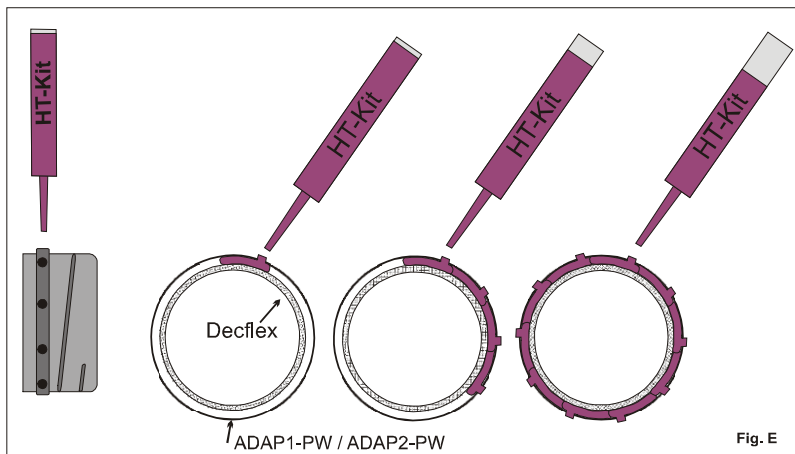
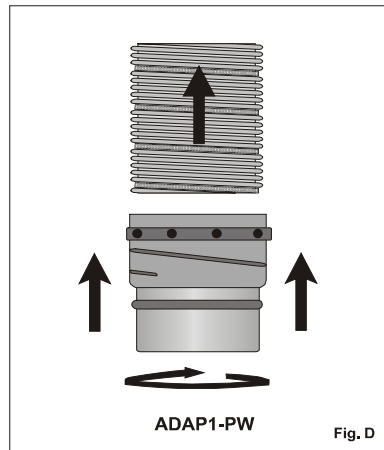
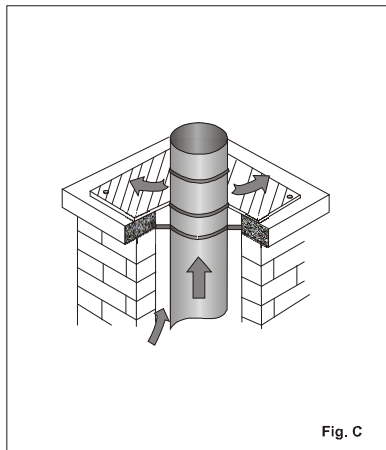
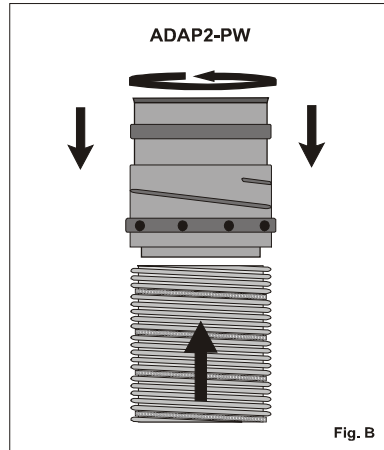
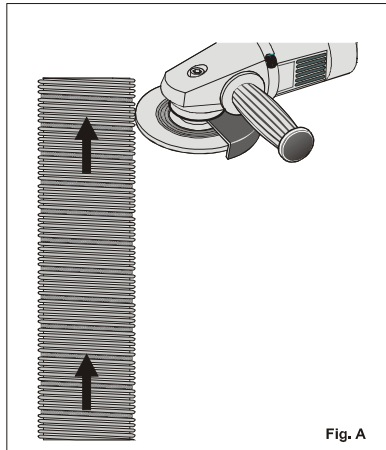
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