







DW-KL

Multi-application double-wall exhaust duct & chimney system suitable for high pressure and temperature

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STRONG, OPEN, INTERNATIONAL GROUP

The Jeremias Group has more than

40 years experience

in the flue and chimney production.

The headquarters are situated in Germany. The Jeremias Group has expanded its activities steadly in Europe being now the single stainless steel chimney manufacturer with

8 production locations in 7 different countries.

Besides production and own sales offices, Jeremias has strong cooperation partnerships with chimney specialist companies all over Europe.

Jeremias is one of the world's leading manufacturers of flue and chimney systems for the exhaust of gases and ventilation, covering all kind of domestic, commercial and industrial applications. Jeremias product range include

100 different CE certified systems

covering commercial and domestic applications complemented by freestanding Industrial steel chimneys up to 4 meter diameter.

Jeremias offers its clients a wide range of high quality products, technical support for projects, chimney sizing software, European CE certification in a modern and dynamic company able to satisfy a wide variety of the flue market requirements needed in the market.





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DW-KL



QUALITY

SERVICE

- > Flexible production line
- > Total flexibility for special parts (customization)
- > Design of project drawings
- > Chimney sizing
- > Test-capable chimney static calculations
- > Biggest product range in the market
- > Development for market-focused system solutions
- > Country specific certifications and installation advice
- > CNC Laser technology
- > CNC stamping technology
- > Modern 3D CAD software
- > Special stainless steel alloys
- > 3D laser cutting
- > System development with boiler, CHP and stove manufacturers
- > Own specific machine development
- > Own test laboratory for acoustic R&I silencer development

QUALITY AND RESOURCES

Manufactured in accordance with the EN 1856-1 (performance requirements for metal chimney systems) and under quality assurance EN ISO 9001:2000.

Jeremias products have achieved designations for all normal applications, in domestic, commercial and industrial projects.

Besides this compulsory CE certification, Jeremias has also special certifications and listings needed in specific countries under i.e.: BS, Hetas, Swiss, Russian or US standards.

For further information, Jeremias can supply technical guidance on various standards including the latest version of the European standard 1856-1:2010. Please contact our certification department.

TECHNICAL **SUPPORT**

- > Chimney sizing
- > Fire rating advice
- > Mechanically controlled ventilation calculation
- > Design and system recommendation
- > Structural design and test-capable chimney static calculations
- > Supply and install service (own installers, or via accredited specialists)
- > After sales service
- > Product warranty



































SYSTEM APPLICATIONS



CHIMNEY SYSTEMS

- > Heating and hot water
- > Chimney relining systems
- > Concentric balance flue systems
- > Shared collective chimney systems CLV
- > Plastic relining systems
- > Fan dilution / fan assisted systems
- > Freestanding chimneys
- > Mast supported chimneys
- > Windshield chimneys



EXHAUST SYSTEMS

- > Generator / turbine exhausts
- > Cogeneration / CHP
- > Incinerator exhausts
- > Industrial process exhausts
- > Engine exhausts
- > Dry oven exhaust
- > Kitchen exhausts
- > Micro-cogeneration



SMOKE EXTRACT SYSTEMS

- > Fire rated smoke ducts to BS 476 pt 20 (4 hours)
- > Fire rated ventilation ducts to UNE-EN 13501
- > Laundry / refuse chutes



VENTILATION

- > Free standing ventilation towers
- > Fire rated ventilation ducts
- > Mechanically controlled ventilation systems

TWIN WALL INSULATED FLUE SYSTEM SPECIALLY DESIGNED FOR GENERATOR EXHAUST

DW-KL is a multifunctional, twin wall insulated stainless steel flue system especially designed for high temperatures, high pressure and condensing.

Its main characteristic is that no sealing material is used but a permanent connection is established through a metal to metal joint without any gaskets, a so-called conical system.

Because of these features it is the only all purpose product in the chimney industry.

FIELDS OF APPLICATION:

> Generator exhaust

High temperature exhaust gases and pressure

> CHP

Combined heat and power

> Smoke extract

Fire rated smoke extract

> Waste gas extract

Industrial process exhaust

> Kitchen extract

Catering / kitchen extract duct

> Light weight particle movement

Blown particles for manufacturing plants

> Fire rated ducting

Enabling multiple fire compartments to be used

> Refuse / laundry chutes

Flats, hotels, hospitals

> Boilers

Condensing and high temperature boilers

> Chemical exhaust

Painting and printing industries

> Drying owens

Automotive industry

> Food processing plants

Catering industry, convenience food

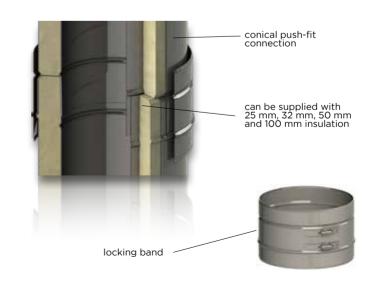
> Incinerators

Using specialist alloys to prevent corrosion

> Condensing boilers

No need of gaskets





Ease of handling

The double wall Jeremias systems are known for ease of handling and therefore quick installation times. The DW-KL system is designed to be used as an alternative to conventional heavy gauge welded steel.

By comparison to these other materials, it is more easily and economically installed.

The DW-KL system is available in 14 standard-sizes **between 80mm** and **600mm** (4" to 24") internal diameter. Larger diameters are available up to 1200mm.

NSULATION QUALITY

DW-KL double wall insulated system uses rigid mineral wool with high density (120kg/m3). **Standard thickness** is **32mm** and **50mm**. Greater thicknesses are available on request.

The special insulation quality and the homogeneity ensure low surface temperatures of pipe and also maintains the exhaust gas temperatures while enabling the ease of installation.

The insulating material between the inner and outer walls is pressed very tightly. Because of this construction the heat transfer to the outer casing is greatly reduced as there is no metal contact (thermal bridge) between the inner gas carrying pipe and the outer wall.

DW-KL system has **excellent acoustic properties** due to the density of the insulation.

chimney system DW-KL

TEMPERATURE

DW-KL is suitable for a continuous flue gas operating temperature of 600°C, (in accordance to EN 1856-1) using different kinds of stainless steel and insulation **temperatures up to 1050°C** can be achieved.

CONNECTION

The connection between components is conical and metal.

This guarantees a fast and easy installation (no flanges, no gaskets) and ensures tightness for all temperatures.

The metal joint is the best connection for a **tight long-life**. Every component has to be mounted so that the **nozzle of the interior pipe** is above or rather in the flow direction of the exhaust gas.

Joint security is protected by a **locking band**.

PRESSURE

The DW-KL system is **certified up to 5000 Pa** for positive pressure (in accordance to EN 1856-1) and **suitable up to 15000 Pa**. It has been successfully tested for negative pressure of 3000 Pa.

MATERIAL

The inner liner, which has contact with the exhaust gas, is manufactured of stainless steel with the material number 1.4571 (316Ti) / 1.4404 (316L). All longitudinal seams are TIG or laser gas shield welded and passivated. Thus the highest possible corrosion resistance is available.

The standard **DW-KL inner liner** is made of **0.6mm** wall thickness or as an option up to 1.0mm on request.

The standard **DW-KL outer liner** is made of **1.4301** (AISI **304**) bright finished (IIID). Other finishes can be supplied on request, e.g. mat, brushed, zinc, painted or copper covered. In **aggressive atmosphere** it is recommended to use stainless steel **1.4404** (AISI **316L**).

BELLOWS AND SILENCERS



THERMAL EXPANSION



As the method of assembly for DW-KL provides a continuous inner wall, expansion of the vent should be allowed above 350°C. DW-KL provides tightness in the inner liner and is therefore suitable also in wet conditions (condensing applications in high pressure).

Any length of duct where expansion is likely to exceed 6 mm between two fixed points, i.e. boiler outlet and elbow, wall supports, etc. must incorporate an expansion component (bellows) to compensate for thermal movement.

Use bellows to accommodate the total expansion between fixed points.

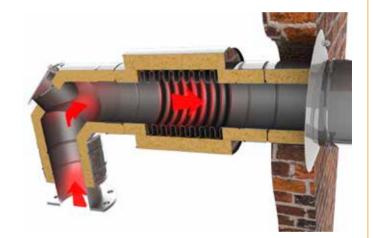
The outer casing is free to expand independently of the inner liner.

Floor and wall bands must be located to allow for lateral movement. Our expansion bellows can accommodate thermal expansion up to 120mm.

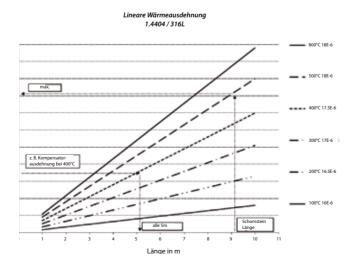
As a general rule to calculate the liner expansion you have to take 1mm per metre and 50°C rise of gas temperature.

For example:

A 25 metre run of DW-KL subjected to a flue gas temperature of 470° C above ambient. $1 \times 25 \times 470/50 = 235 \text{ mm}$



Therefore, total expansion which needs to be accommodated for this example is 235 mm.



NOISE REDUCTION



With the DW-KL system we can also provide a wide range of different silencers depending on the application field:

- > Absorption silencer for wet and dry conditions for different sound level reduction categories
- > Absorption silencers in angle- or T-design if there is not much place for installation
- > Absorption cores for additional sound reduction, to be placed in the chimney
- > Combined silencer with resonance and absorption chambers for damping a wide acoustic spectrum
- > Head silencer for installation at the top of the chimney
- > We create non-standard products for any special requirement

To keep the regired noise level, there are cases where we can reduce the diameter installing a silencer at the end of the system.

ABSORPTION SILENCERS

ASD-F

Exhaust silencer for wet operation mode for small CHPs, high positive pressure

COMBINED SILENCERS

ZUTE.805

Combined exhaust silencer with absorption and resonance chambers for small and medium-sized block heating stations for a wide frequency spectrum, wet and dry operation mode



ZUTE.783

Combined exhaust silencer with absorption and resonance chambers for small and medium-sized block heating stations, wet and dry operation mode, with radial inflow



INSERTION
SILENCERS /
TOP-MOUNTED
SILENCERS

SDK

Sound absorbing insert to be hinged into the top part of the chimney for an easy conversion into existing chimneys, for medium and high frequencies

Please contact our technical department for further information on special contructions etc.

TECHNICAL DATA GENERAL

APPLICATION

Double wall pressure-resistant flue gas system (resistant to 5000 Pa) made of stainless steel for all standard furnaces, combustion-engines and CHP appliances in negative, positive- and high-pressure for dry and moist operation mode.

COMBUSTIBLE

oil, gas and solid fuels

WORKING TEMPERATURE

≤ 400°C / ≤ 600°C

MATERIAL

inside: 1.4571 (316Ti) / 1.4404 (316L)

outside: 1.4301 (304)

WALL THICKNESS

inside: 0,6 (also available from < 0,6 - 1,0mm) outside: 0,6 (also available from < 0,6 - 1,0mm)

WELDING SEAM

TIG continuous / laser

INSULATION

mineral insulation with 32 mm wall thickness, bulk density 120 kg/m³

CONNECTION

negative / positive pressure with conical connection

POSITIVE PRESSURE

200 Pa / 5000 Pa

SOOT FIRE RESISTANT

see CE designations (G)

FREE STANDING EXTENSION

3 m up to last wall spacer to \emptyset 600 1,5 m up to last wall spacer > \emptyset 600 - 1.000

THERMAL RESISTANCE

0,501 m² K/W

ADMISSION / ASSESSMENTS

DW-KL - EXHAUST SYSTEM

(N) CE mark number 0036 CPD 9174 002

CE classifications DIN EN 1856 - 1

DW-KL - CONNECTING PIPE

CE mark number

0036 CPD 9174 041

CE classifications DIN EN 1856 - 2

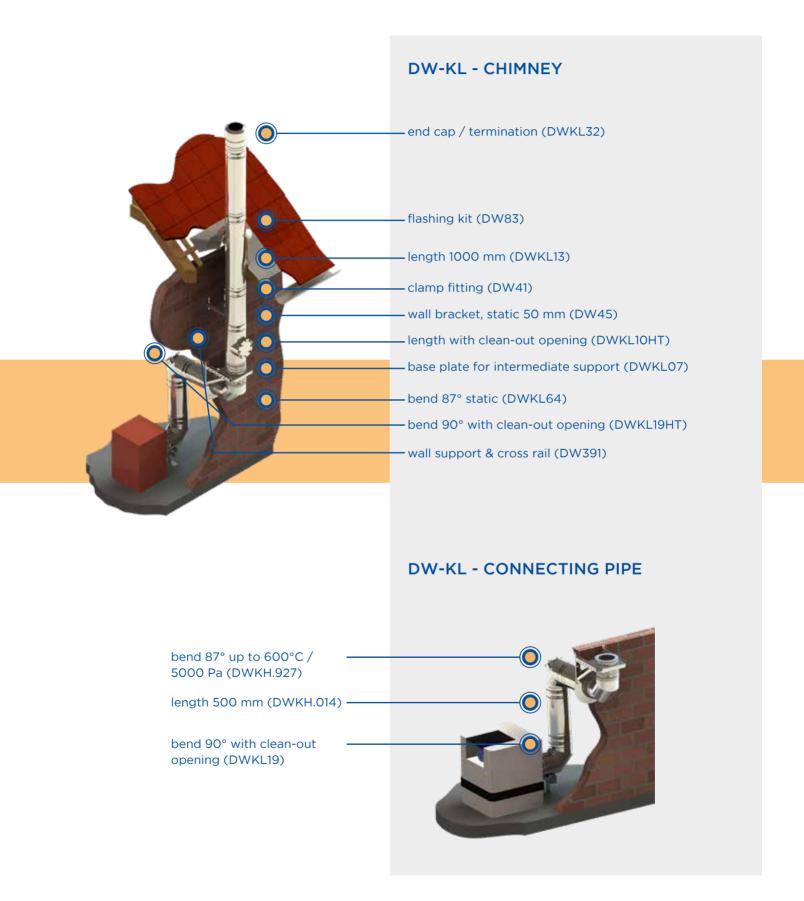
T600 - N1 - D - V3 - L50060 - G100 T600 - H1 - W - V2 - L50060 - G100

Application

The system DW-KL can be used for the evacuation of exhaust gases from all oil- gas and solid fuel-fired furnaces in negative and positive pressure operation mode (5000 Pa) with a maximum temperature of 600°C.

CHPs

The system DW-KL can be connected to block heat stations with flanges.



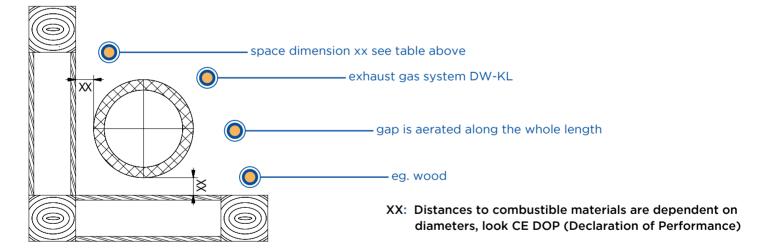
MINIMUM SPACE AND SIZE RATIO



MINIMUM SPACE TO COMBUSTIBLE MATERIALS IN THE UPRIGHT PART

On application of the vent line a minimum dimension of 20 mm at 400 °C or 50 mm at 600 °C has to be kept. Up to a maximum thermal resistance of 2.5^2 k/w of the close-by flammable component a minimum dimension of 50 mm, measured on the outer layer of the exhaust gas system. If the thermal resistance of the close-by flammable component (eg. at high-thermal insulated framehouse) exceeds 2.5 m^2 k/w, the light space has to be recalculated. If the value is not exceeded, the below listed values are valid. At wall penetration the state building codes are valid.

	DW-KL	minimum space
DW 400	\bowtie	xx ≥ 50 mm at 400 °C
DW 400 FU	\bowtie	xx ≥ 20 mm at 400 °C
DW 600 FU P1	\bowtie	xx ≥ 20 mm at 600 °C
DW 600 N1		xx ≥ 50 mm at 600 °C
DW 600 FU H1	Ø	xx ≥ 50 mm at 600 °C



For further space regulations see national building regulations (eg. in Germany DIN V 18160-1).

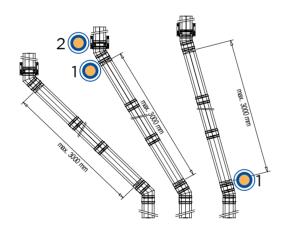




MINIMUM SPACE TO COMBUSTIBLE MATERIALS IN THE UPRIGHT PART

If the exhaust gas system is to be moved, the maximum dimensions of the following drawing should be observed.

INCLINED RUN 15° / 30° / 45°



Please observe that the cleanout openings have to be according to the national regulations.

INCLINED RUN 87°



- 1 Fixing with wall brackets DW 20-24
- 2 Intermediate support and wall support



Which fuel type is the right one for your heating? For renovation or new construction: the right Jeremias flue system makes it possible.

ASSEMBLY / QUALITY

ASSEMBLY

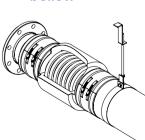
Assembly is accomplished in five easy stages.

- Having ensured that the conical joining parts are clean and not damaged, apply our KL lubricant paste to the male conical pipe normally at the bottom end of the pipe and bring the two conical joints together.
- 2. Insert the male joint into the female of the two elements.
- 3. Loosely **push** the two pipes **together**.
- 4. Tap the top pipe to ensure correct seating of the joint while ensuring that you do not damage the pipe you are tapping. Light tapping with a rubber, nylon or wooden headed mallet.
- 5. Fit locking band.

The integrity of the joint between components is dependent upon the correct use of these instructions.



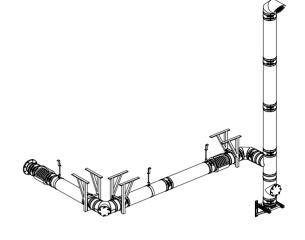
Expansion bellow



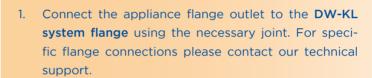


INSTALLING INSTRUCTIONS DW-KL "PUSH AND FIT"

The different components of the DW-KL system have to be connected together by using the fitting paste. Lubricate both ends, push them together knocking lightly with the help of a board and a hammer and fit with the locking band.



CONNECTING PIPE / HORIZONTAL RUN

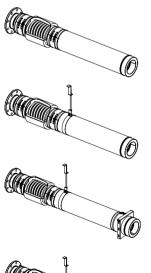


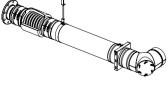


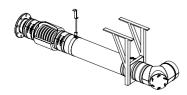
In the case that an expansion bellow is necessary, install it on an accessible place on the connection flue to the system. Please remember, as a general rule, that the expansion below has to be installed in between two fixed points.



- 3. Install all the **necessary lengths** till the next fixing point.
- 4. In the horizontal run, use **hanging brackets** every three meters.
- 5. Always use a fixing point before a bend.
- 6. Install the **90° bend** with "integrated installing device" at the end of the connecting pipe and push it to the system knocking lightly with the help of a board and a hammer. (specific drawing is necessary)
- 7. It is now when you can definitely fix the support to the ceiling, wall or steel structure. It is recommended to use the supports (DW01) and brackets (DW391).







- 8. Use **another fixing point** after the bend and fix it with the help of appropriate supports to the ceiling, wall or steel structure.
- 9. The number of the expansion bellows necessary to compensate the expansion of each particular system has to be calculated and it depends on the length of the horizontal run and the smoke temperature inside the system.



- 10. Please be sure you keep a proper maintenance of the system in order to avoid impurities from the combustion that could damage the waves of the bellows and therefore the correct length compensation.
- 11. Every expansion bellow needs a **fixing point** after it to contain the expansion.

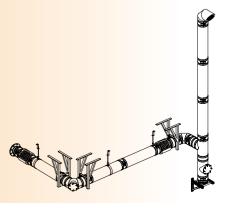


VERTICAL CHIMNEY

12. Calculate the **height of the connection** to the T branch and fix the wall support, there are many ways to support the vertical chimney, please see different supports and brackets in the component list.



- 13. We recommend the installation of inspection elements with door in order to access to the cleaning of the system. In many European countries the use of a clean out opening is compulsory. Please revise your national legislations and local authority's building regulations.
- 14. Verify the **correct fitting** of the lengths and locking bands. The locking band has two parallel beadings, one to the inside and one to the outside. These two beadings have to match **exactly to the lengths**.(detailed photo) Once the beadings match together fix the locking band with the two hose dips, we recommend the use of an automatic screwdriver.
- 15. All the **brackets** are designed for the lateral stability of the system and not for supporting the system. Please see the tables with the distances between brackets, supports and offsets.



CASE STUDIES

BMW - MUNICH / GERMANY

APPLICATION:

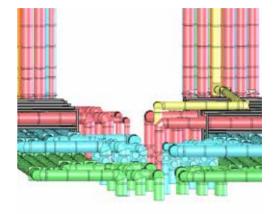
INDUSTRIAL SMOKE EXHAUST

DIAMETER:

Ø 200 - 550 mm

LENGTH:

2.260 m (39 SYSTEMS)



With the BMW project Jeremias has demonstrated how to solve specific requirements for industry, developing new items and special parts in coordination with the installing company and the final client.

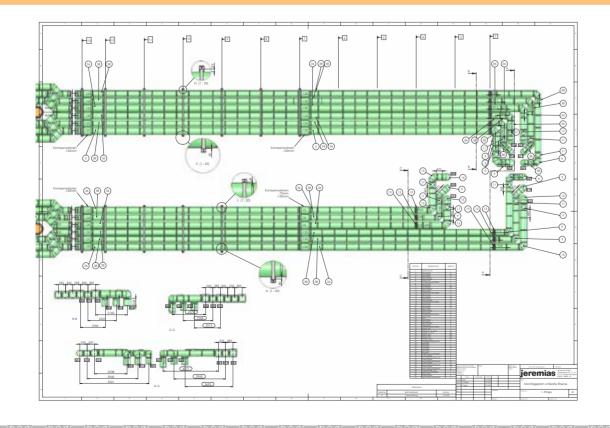
39 engine exhaust test cells are evacuated individually; all the exhausts are put together into a mast supported riser. The positive pressure of 5000 Pa and the smoke temperature were the handicaps for this installation, DW-KL was the solution.

Another example of how an industrial project can be integrated in the urban scenario like a piece of art.



Jeremias has developed a lot of market-typical system parts. Please contact your local Jeremias partner to receive a detailed consultation on our market specific solutions.





ENERGY CENTER SCHLANDERS / ITALY

APPLICATION:

WOOD CHIP GASIFICATION, CHP (BIODIESEL, BIOGAS)

DIAMETER:

Ø 200, 250 & 350 mm

LENGTH:

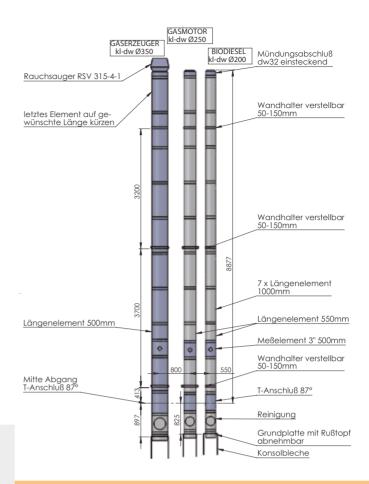
108 m (3 SYSTEMS)

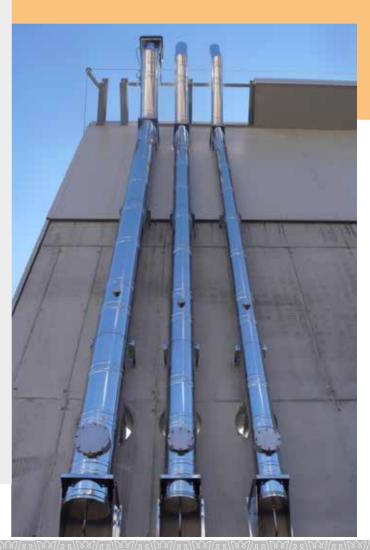
The Jeremias project has provided the exhaust system for a high technology green electricity plant based in Schlanders, a village in the north Italian region of Trentino Alto Adige, together with Dr.-Ing. Lothar Peintner.

A high technology synthesis gas generator uses microwave and plasma technology to produce fuel gas with high hydrogen content using wood chips as a combustible source.

This high hydrogen content gas is used to generate combined heat and power. The performance of the plant is about 220 kW electricity power and 500 kW thermal output.

In addition the energy plant is completed by the installation of a biodiesel engine with a net electrical output of about 250 kW and a thermal output of 290 kW.



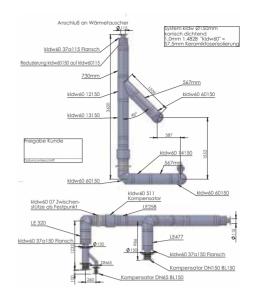


In the Jeremias product-portfolio we have standard systems for applications and we have the capacity and experience to design the modifications or adapt our systems to special applications.

Gasifying of wood chips with flue gas temperatures of **900°C** creates special demands on material - in flue liner and insulation. This was solved by Jeremias with DW-KL, high temperature steel and ceramic fibre insulation to protect health and environment.

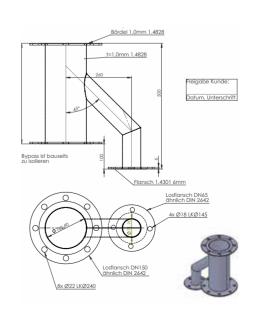
Flue ducting with long expansions caused by high temperature requires special technical design.

DW-KL is developed to absorb these expansions with bellows.









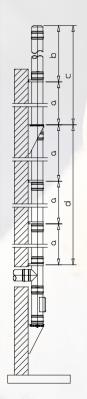
MOUNTING HEIGHT OF THE SYSTEM

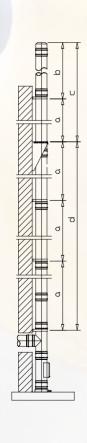
Jeremias provides **technical advice** for system application and size calculation. All the flue size calculations done by our technicians are in accordance with the requirements defined at the EN 13384-1 (single appliances) and EN 13384-2 (multi appliances) standards.

Jeremias provides the **necessary reports** for these calculations. Please take into account the flue height terminations depend on national, regional or even local authorities. Therefore we recommend you to contact Jeremias at the specific country.



Maximum mounting heights and distances in m





Ø inner [mm]	DW-KL	;	a	k		С	d
support		DW21	DW45	DW21	DW45		
80	⊌	4	4	3	3	53	64
100	⊌	4	4	3	3	53	64
115	⊌	4	4	3	3	53	64
130	lacktriangle	4	4	3	3	53	64
150		4	4	3	3	41	60
160	lacktriangledown	4	4	3	3	40	58
180	lacktriangledown	4	4	3	3	38	54
200		4	4	3	3	37	49
225	lacktriangle	2	4	3	3	35	44
250		2	4	1,5	3	32	39
300	⊌	2	4	1,5	3	27	38
350	Ø	2	4	1,5	3	24	36
400	Ø	2	4	1,5	3	22	35
450	Ø	2	4	1,5	3	20	32
500	Ø	2	4	1,5	3	16	28
600	Ø	2	4	1,5	3	15	21
650	Ø	-	4	-	1,5	-	13
700	Ø	-	4	-	1,5	-	12
750	Ø	-	4	-	1,5	-	12
800	Ø	-	4	-	1,5	-	11
850	Ø	-	4	-	1,5	-	10
900	Ø	-	4	-	1,5	-	10
1000	⊌	-	4	-	1,5	-	9

Please take these distances as general reference. Please contact our technical department for exact documentation on weights and installation heights.

OFFSETS & ANGLES



	Α	В	С	D
80	80	145	45,8	348
	100	165	46,5	353,3
115	115	180	47	357,2
120	120	185	47,2	358,5
130	130	195	47,5	361
	140	205	47,9	363,7
150	150	215	48,2	366,3
160	160	225	48,6	368,9
180	180	245	49,2	374
200	200	265	49,9	379,2
225	225	290	50,8	385,7
	250	315	51,6	392,1
300	300	365	53,3	405,1
350	350	415	55	418
400	400	465	56,7	431
450	450	515	58,4	443,9
500	500	565	60,1	456,8
550	550	615	61,8	469,8
600	600	665	63,6	482,7

DWKL 3				
	Α	В	С	D
80	80	145	98,4	367,3
100	100	165	101,1	377,3
115	115	180	103,1	384,8
120	120	185	103,8	387,3
130	130	195	105,1	392,3
140	140	205	106,5	397,3
150	150	215	107,8	402,3
160	160	225	109,1	407,3
180	180	245	111,8	417,3
200	200	265	114,5	427,3
225	225	290	117,9	439,8
250	250	315	121,2	452,3
300	300	365	127,9	477,3
350	350	415	134,6	502,3
400	400	465	141,3	527,3
450	450	515	148	552,3
500	500	565	154,7	577,3
550	550	615	161,4	602,3
600	600	665	168,1	627,3

DWKL 4	5°			
	Α	В	С	D
80	80	145	154,2	372,3
100	100	165	160	386,4
115	115	180	164,4	397
120	120	185	165,9	400,5
130	130	195	168,8	407,6
140	140	205	171,8	414,7
150	150	215	174,7	421,8
160	160	225	177,6	428,8
180	180	245	183,5	443
200	200	265	189,3	457,1
225	225	290	196,7	474,8
250	250	315	204	492,5
300	300	365	218,6	527,8
350	350	415	233,3	563,2
400	400	465	247,9	598,5
450	450	515	262,6	633,9
500	500	565	277,2	669,2
550	550	615	291,9	704,6
600	600	665	306,5	739,9



DWKL 15				
	Α	В	С	D
80	80	145	94,5	529,7
100	100	165	95,2	534,9
115	115	180	95,7	538,8
120	120	185	95,9	540,1
130	130	195	96,2	542,7
140	140	205	96,5	545,3
150	150	215	96,9	547,9
160	160	225	97,2	550,4
180	180	245	97,9	555,6
200	200	265	98,6	560,8
225	225	290	99,4	567,3
250	250	315	100,3	573,7
300	300	365	102	586,7
350	350	415	103,7	599,6
400	400	465	105,4	612,6
450	450	515	107,1	625,5
500	500	565	108,8	638,4
550	550	615	110,5	651,4
600	600	665	112.2	664.3

DWKL 30° + LE250				
	Α	В	С	D
80	80	145	192,4	530,1
100	100	165	195,1	540,1
115	115	180	197,1	547,6
120	120	185	197,8	550,1
130	130	195	199,1	555,1
140	140	205	200,5	560,1
150	150	215	201,8	565,1
160	160	225	203,1	570,1
180	180	245	205,8	580,1
200	200	265	208,5	590,1
225	225	290	211,9	602,6
250	250	315	215,2	615,1
300	300	365	221,9	640,1
350	350	415	228,6	665,1
400	400	465	235,3	690,1
450	450	515	242	715,1
500	500	565	248,7	740,1
550	550	615	255,4	765,1
600	600	665	262,1	790,1

DWKL 4	5° + LE25	0		
	Α	В	С	D
80	80	145	287,1	-
100	100	165	293	-
115	115	180	297,4	-
120	120	185	298,8	-
130	130	195	301,8	-
	140	205	304,7	-
150	150	215	307,6	-
160	160	225	310,6	-
180	180	245	316,4	-
200	200	265	322,3	-
225	225	290	329,6	-
	250	315	336,9	-
300	300	365	351,6	-
350	350	415	366,2	-
400	400	465	380,9	-
450	450	515	395,5	-
500	500	565	410,1	-
550	550	615	424,8	-
600	600	665	439,4	-



DWKL 19				
	Α	В	С	D
80	80	145	159,2	771,2
100	100	165	159,9	776,4
115	115	180	160,4	780,3
120	120	185	160,6	781,6
130	130	195	160,9	784,2
140	140	205	161,2	786,7
150	150	215	161,6	789,3
160	160	225	161,6	789,3
180	180	245	162,6	797,1
200	200	265	163,3	802,3
225	225	290	164,1	808,7
	250	315	165	815,2
300	300	365	166,7	828,2
350	350	415	168,4	841,1
400	400	465	170,1	854
450	450	515	171,8	867
500	500	565	173,5	879,9
550	550	615	175,2	892,9
600	600	665	176,9	905,8

100 100 165 320,1 756,7 115 115 180 180 322,1 120 120 185 322,8 766,7 130 130 195 324,1 771,7 140 140 205 325,5 776,7 150 150 215 326,8 781,1 160 225 328,1 786,7 180 180 245 330,8 796,7 200 200 265 333,5 806,7 225 225 290 336,9 819,2 250 250 315 340,2 831,7 300 300 365 346,9 856,7	DWKL 30° + LE500				
100 100 165 320,1 756,7 115 115 180 180 322,1 120 120 185 322,8 766,7 130 130 195 324,1 771,7 140 140 205 325,5 776,7 150 150 215 326,8 781,1 160 160 225 328,1 786,7 180 180 245 330,8 796,7 200 200 265 333,5 806,7 225 225 290 336,9 819,2 250 250 315 340,2 831,7 300 300 365 346,9 856,7		Α	В	С	D
115 115 180 180 322,1 120 120 185 322,2 766,7 130 135 195 324,1 771,7 140 140 205 325,5 776,7 150 150 215 326,8 781,1 160 160 225 328,1 786,7 180 180 245 330,8 796,7 200 200 265 333,5 806,7 225 225 290 336,9 89,2 250 250 315 340,2 831,7 300 300 365 346,9 856,7	80	80	145	317,4	746,6
120 120 185 322,8 766,7 130 130 195 324,1 771,7 140 140 205 325,5 776,7 150 150 215 326,8 781,1 160 160 225 328,1 786,7 180 180 245 330,8 796,7 200 200 265 333,5 806,7 225 225 290 336,9 819,2 250 250 315 340,2 831,7 300 300 365 346,9 856,7	100	100	165	320,1	756,7
130 130 195 324,1 771,7 140 140 205 325,5 776,7 150 150 215 326,8 781,1 160 160 225 328,1 786,7 180 180 245 330,8 796,7 200 200 265 333,5 806,7 225 225 290 336,9 819,2 250 250 315 340,2 831,7 300 300 365 346,9 856,7	115	115	180	180	322,1
140 140 205 325,5 776,7 150 150 215 326,8 781,1 160 160 225 328,1 786,7 180 180 245 330,8 796,7 200 200 265 333,5 806,7 225 225 290 336,9 819,2 250 250 315 340,2 831,7 300 300 365 346,9 856,7	120	120	185	322,8	766,7
150 150 215 326,8 781,1 160 160 225 328,1 786,7 180 180 245 330,8 796,7 200 200 265 333,5 806,7 225 225 220 336,9 819,2 250 250 315 340,2 831,7 300 300 365 346,9 856,7	130	130	195	324,1	771,7
160 160 225 328,1 786,7 180 180 245 330,8 796,7 200 200 265 333,5 806,7 225 225 290 336,9 819,2 250 250 315 340,2 831,7 300 300 365 346,9 856,7	140	140	205	325,5	776,7
180 180 245 330,8 796,7 200 200 265 333,5 806,7 225 225 290 336,9 819,2 250 250 315 340,2 831,7 300 300 365 346,9 856,7	150	150	215	326,8	781,1
200 200 265 333,5 806,7 225 225 290 336,9 819,2 250 250 315 340,2 831,7 300 300 365 346,9 856,7	160	160	225	328,1	786,7
225 225 290 336,9 819,2 250 250 315 340,2 831,7 300 300 365 346,9 856,7	180	180	245	330,8	796,7
250 250 315 340,2 831,7 300 300 365 346,9 856,7	200	200	265	333,5	806,7
300 300 365 346,9 856,7	225	225	290	336,9	819,2
	250	250	315	340,2	831,7
350 350 415 353,6 881,7	300	300	365	346,9	856,7
	350	350	415	353,6	881,7
400 400 465 360,3 906,7	400	400	465	360,3	906,7
450 450 515 367 931,7	450	450	515	367	931,7
500 500 565 373,7 956,7	500	500	565	373,7	956,7
550 550 615 380,4 981,7	550	550	615	380,4	981,7
600 600 665 387,1 1006,	600	600	665	387,1	1006,7

DWKL 45° + LE500				
	Α	В	С	D
80	80	145	463,9	682
100	100	165	469,8	696,1
115	115	180	474,2	706,7
	120	185	475,6	710,3
130	130	195	478,5	717,3
140	140	205	481,5	724,4
150	150	215	484,4	731,5
	160	225	487,3	738,5
180	180	245	493,2	752,7
200	200	265	499,1	766,8
225	225	290	506,4	784,5
	250	315	513,7	802,2
300	300	365	528,3	837,6
350	350	415	543	872,9
400	400	465	557,6	908,2
	450	515	572,3	943,6
500	500	565	586,9	979
550	550	615	601,6	1014,3
600	600	665	616,2	1049,7

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	Α	В	С	D		
80	80	145	288,6	1254,2		
100	100	165	289,3	1259,4		
115	115	180	289,8	1263,2		
120	120	185	290	1264,5		
130	130	195	290,3	1267,1		
	140	205	290,7	1269,7		
150	150	215	291	1272,3		
160	160	225	291,3	1274,9		
180	180	245	292	1280		
200	200	265	292,7	1285,2		
225	225	290	293,5	1291,7		
250	250	315	294,4	1298,2		
300	300	365	296,1	1311,1		
350	350	415	297,8	1324,1		
400	400	465	299,5	1337		
450	450	515	301,2	1349,9		
500	500	565	302,9	1362,9		
550	550	615	304,6	1375,8		
600	600	665	306,3	1388,8		

DWKL 30° + LE1000							
	Α	В	С	D			
80	80	145	567,4	1179,7			
100	100	165	570,1	1189,7			
115	115	180	572,1	1197,2			
120	120	185	572,8	1199,7			
130	130	195	574,1	1204,7			
140	140	205	575,6	1209,7			
150	150	215	576,8	1214,7			
160	160	225	578,1	1219,7			
180	180	245	580,2	1229,7			
200	200	265	583,5	1239,7			
225	225	290	586,9	1252,2			
250	250	315	590,2	1264,7			
300	300	365	596,9	1289,7			
350	350	415	603,6	1314,7			
400	400	465	610,3	1339,7			
450	450	515	617	1364,7			
500	500	565	623,7	1389,7			
550	550	615	630,4	1414,7			
600	600	665	637,1	1439,7			

DWKL 45° + LE1000							
	Α	В	С	D			
80	80	145	817,5	1035,5			
100	100	165	823,3	1049,7			
115	115	180	827,7	1060,3			
120	120	185	829,2	1063,8			
130	130	195	832,1	1070,9			
	140	205	835	1077,9			
150	150	215	838	1085			
160	160	225	840,9	1092,1			
180	180	245	846,7	1106,2			
200	200	265	852,6	1120,4			
225	225	290	859,9	1138			
250	250	315	867,3	1155,7			
300	300	365	881,9	1191,1			
350	350	415	896,5	1226,4			
400	400	465	911,2	1261,8			
450	450	515	925,8	1297,1			
500	500	565	940,5	1332,5			
550	550	615	955,1	1367,9			
600	600	665	969,8	1403,2			

CE DECLARATION OF PERFORMANCE (DOP) LARGEST NUMBER OF CE - CERTIFIED SYSTEMS

The Jeremias group of companies has been present in the flue industry for more than 40 years, and now is the stainless steel flue systems manufacturer with the largest number of CE certified systems. The CE MARK is the symbol – obligatory since April 2005 – that certifies that a stainless steel chimney is in accordance with the EN 1856-1.

This standard specifies the performance requirements for rigid single and multi-wall system chimney products with metallic liners (chimney sections, chimneys fittings and terminals, including supports) used to convey the products of combustion from appliances to the outside atmosphere.

It also specifies the requirements for marking, manufacturer's instructions, product information and evaluation of conformity of the product to the standard.

The EN 1856-1 introduces a requirement for a certified factory production control system, which is in addition to any existing ISO 9001 factory quality scheme. This ensures, through continuous assessment and external quality audits, that the manufactured product conforms with the performance designation of the product.

A simple code will give the user information about the suitability of the system for different applications.



TEMPERATURE CLASS

T80, 100, 120, 140, 160, 200, 250, 300, 400, 450, 600 This indicates the normal maximum operating temperature of the chimney.

PRESSURE CLASS

N1, N2, P1, P2, H1, H2

The pressure class relates to the product's suitability and gas tightness when used on positive pressure applications up to 200 pa (P), negative (N) draught applications, and high positive pressure (H) applications and is further classified as to the degree of leakage allowed with either a 1 or 2, with 1 having the lowest leakage rate.















CONDENSATE RESISTANCE CLASS

W=Wet, D=Dry

CORROSION RESISTANCE

V1, V2, V3, Vm

- V1: Sulphur content < = 50 mg/m³, natural gas L+H Kerosene: Sulphur content < = 50 mg/m³.
- V2: Natural gas L+H Oil: Sulphur content < = 0.2 mass % Kerosene: Sulphur content > = 50 mg/m³ wood in open fireplaces.
- V3: Natural gas L+H Oil: Sulphur content > 0.2 mass % Kerosene: Sulphur content > = 50 mg/m³ wood in open fireplaces. Wood in closed stoves, coal peat
- Vm: Self declared by the manufacturer as suitable for the application based on product history and historical performance in the field. The corrosion resistance class should be matched against the fuel type.

THE LINER SPECIFICATION

The liner specifications offer a number of material codes together with the lowest diameter liner thickness.

SOOT FIRE RESISTANCE

G [X] = with soot fire resistance

O [X] = without soot fire resistance

[X] = product declared minimum distance to combustible material in mm.

The CE mark enables the product to circulate freely in the European market, being the highest standard for metal chimney systems in the world; nevertheless each country could have its own installation rules. Jeremias also has a wide range of specific certifications to enforce national, regional or even local regulations. No matter where the project will be installed, Jeremias will provide the necessary certification to meet the local approvals procedure.

For any specific documentation needed during project specification please contact our technical department.

^{*}Please have a look at our AGBs for detailed regulations

EXHAUST SYSTEMS FOR YOUR INDUSTRIAL APPLICATIONS

With us, your project is in the best hands!

Our experts advise you personally from chimney design and planning right through to the production and assembly of ready-to-install exhaust system.

Together with you, we plan all necessary process steps and consider your individual requirements and wishes.

This is how we develop the optimal chimney solution for your project, making even the most demanding projects run smoothly and successfully.



Our services cover the following specifications:

Basic evaluation / project planning

- > Definition of plans, site surveying
- > Determination of dimensions of exhaust gas pipes according to DIN 4133 / EN 13084 on the basis of the structural and heating requirements
- > Determination of dimensions of the ventilation towers according to DIN / EN regarding the ventilation technical requirements
- > Preparation of verifiable static calculations according to DIN 4133 / EN 13084 in consideration of the geographical and static specifications on site

Execution of construction work

- > Preparation of execution drawings for release on site
- > Preparation of workshop drawings
- > Delivery according to construction schedule
- > Coordination of installation with site management
- > Complete installation package.

Condition monitoring

> according to DIN 4133 / EN 13084









STRENGTHS

State-of-the-art machinery, a permanent product control by our own welding specialist engineers, high quality standards as well as flexibility.

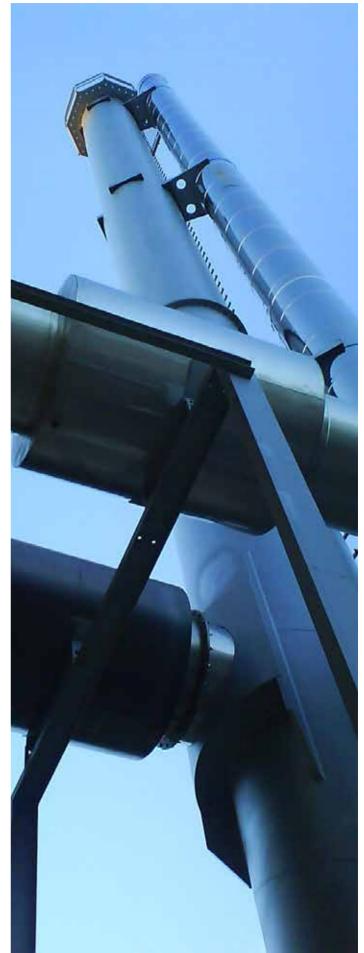
DEVELOPMENT

The continuous further development of all of our products is part of our elaborate type series, which meet the increasing demand of ecological awareness (exhaust and sound emissions) as well as high aesthetic demands of our clients.

ENGINEER STANDARDS

Both new installations as well as renovations of existing flue gas-, chimney- or ventilation systems are always carried out in accordance to DIN 4133 / EN 13084 in all parts of Europe.





PRODUCTION SITES

GERMANY

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The expert in your area:

Jeremias high quality products to be installed only by selected experts.

