General overview.

Whoever wants it flexibly plans with Raab-chimney systems!
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Central office and stainless steel fabrication
Joseph Raab GmbH & Co KG, Neuwied (Rhineland-Palatinate)

J.Raab AG, Luckenau (Saxony-Anhalt)
Raab can look back on a long tradition as a company. With more than 100 years of experience as a supplier to the construction industry, it has always demonstrated its skill and expertise in terms of company management and in the selection of the products offered. This was also the case in 1983 as concrete chimney terminals were added to the product range for the first time. This seemingly insignificant decision would come to define Raab, as this represented a step away from the primary product line of precast concrete components with all of the company’s know-how into a niche that would prove to be a dependable and stable market for years to come. Step by step a new field of activity developed. In 2005 the Raab Group spun off the production of plaster and mortar products and sold the facilities for precast lightweight concrete products. At the same time, production of stainless steel chimney systems became the core competency. Today, Raab is the market leader in this field and is expanding throughout Europe.

Chimney systems from Raab represent state-of-the-art solutions for modernising or expanding existing chimney systems and possess, in addition, the ideal attributes for special challenges in industry. In Raab’s own research laboratory, our engineers are engaged in the continuous improvement and refinement of products. Theory and practical experience meld together here and point to new and innovative approaches for series production.

For instance, the success story of the Alkon Series is based on the idea of a novel jointing system without troublesome seals that was quickly accepted because of its practical benefits. The terminal EN plus from our range of accessories is the first chimney terminal with which difficult wind conditions at the top of the chimney can be verifiably reduced. A high standard for our products combines development and continuity. Thus, our systems remain compatible regardless of the improvements that are released to production.

The will to ensure quality is documented in writing. Raab’s quality management system has been certified since 1997. This means that the company is committed to providing high quality on a continuing basis, particularly with regard to staying close to our customers, integration of employees and continuous improvement of all processes and products.

This general overview will give you an idea of our extensive product range. We will help you with the correct decision, refer you to specialists and then supply all necessary components in a single package. On-site installation is handled by a trained technician, after which you can put your new heating appliance or boiler into operation almost immediately.

Find the chimney for you at Raab!
One of the many benefits of stainless steel chimney systems is their versatility. Thanks to their low weight, their ease of assembly and the appealing surface appearance, there are neither technical nor aesthetic limits when it comes to selection of a special installation location. The success story of stainless steel chimney systems extends from the ideal solution through refurbishment of aging chimneys to unique designs of self-contained and complex systems. Selection of the optimal system is determined by the application, type of heating appliance and, last but not least, your personal vision. Wherever there is smoke, we will reliably convey it outside and away!
High-quality processing of stainless steel is our core competency and simultaneously forms the basis for many additional products associated with the discharge of flue gas. The material itself seems to have been created for this purpose; it is durable, robust and resistant. It can be processed in many ways and still retain its appealing appearance. Thus, it is no wonder that these flue gas systems enjoy great popularity and are used regularly in home construction. The basic distinction is drawn between single-wall and double-wall systems. While single-walled pipes are used primarily for refurbishment of existing chimneys, double-wall systems are approved for free-standing installation inside and outside of buildings.

**Stainless steel systems**

Double-wall systems

Double-wall systems are self-contained flue gas systems.

Double-wall stainless steel system

**DW-Alkon (page 8)**

It represents the all-round approach and finds use as a complete solution both indoors and outdoors.

**Applications:** Conventional heating appliances e.g. boilers, furnaces, gas heaters, open fireplaces, tiled stoves, pellet-fired burners etc., low-temperature systems, condensing systems, cogeneration units, emergency power generators/engine plants, bakery ovens, positive and negative pressure operation, indoor and outdoor installation.

**Jointing technique:** Slip-together, precisionfit, manually sealing jointing technique, patented throughout Europe.

Double-wall stainless steel system

**DW+DW/FU (page 10)**

The classic approach as the complete solution both indoors and outdoors.

**Applications:** Conventional heating equipment e.g. boilers, furnaces, gas heaters, fireplaces, tiled stoves etc., low-temperature systems, negative pressure operation, indoor and outdoor installation.

**Jointing technique:** Classic assembly with clamp fittings.

Single-wall systems

Single-wall systems are generally used for refurbishment. This is often necessary when modernising the heating system.

Single-wall stainless steel system

**EW-Alkon (page 12)**

It represents the all-round approach to refurbishment of existing chimney systems.

**Applications:** Conventional heating equipment e.g. boilers, stoves gas heaters, open fireplaces, tiled stoves, pellet-fired burners etc., low-temperature systems, condensing systems, cogeneration units, emergency power generators/engine plants, bakery ovens, positive and negative pressure operation, cross-section reductions in existing systems.

**Jointing technique:** Slip-together, precision-fit, metal seal for long-term durability, patented throughout Europe.

Single-wall stainless steel system

**EW-EW/FU (page 14)**

The classic approach for relining already existing chimney systems.

**Applications:** Conventional heating appliances e.g. boilers, stoves, gas heaters, open fireplaces, tiled stoves, pellet-fired burners etc., low-temperature systems, negative pressure operation, cross-section reductions in existing systems.

**Jointing technique:** The components are simply pushed together.
Shaft systems

Shaft systems are installed when an inconspicuous appearance is desired in the house. In the case of refurbishment, they simply replace the old chimney; in new construction, they can be incorporated into the plans from the very beginning. Depending on requirements, they can also fulfill additional functions such as a room seal application or they provide enough space for installation of additional housing technology in a second shaft. The space-saving dimensions and lightweight construction of shaft systems can be the answer to static and architectural challenges. In most cases, they do not need an additional foundation and can also be erected on floors supported by wooden beams. As their name clearly indicates, shaft systems are universally applicable multi-talents.

Shafts with an integrated inner liner

In this shaft system, the inner liner is already integrated. Thanks to its dry construction method and the built-in stainless steel flue, the system can be finish-treated immediately after installation and heated straight away.

Shafts for integration of inner liner

Depending on requirements, these shaft systems come equipped with the appropriate chimney system. The strengths of these shafts result from the numerous possible applications. Whether as a single-flue shaft for inner liner or as a single- or double-flue shaft for a balanced flue system for solid fuels or as an installation shaft for wiring.

Chimney terminals

Under this heading you will find chimney top claddings, terminals and chimney extensions. Chimney top claddings are often employed to guard against weathering and protect the materials used in construction; the also represent the crowning touch on every chimney system. In their many variations, terminals solve various problems, from simply protecting against leaves, rain and nesting birds to providing a specific improvement of the combustion process in your heating appliance. With chimney extensions, you can modify your stainless steel flue system to satisfy changing requirements. You will find the right solution for almost every need in our range of accessories; for a reliable diagnosis, we recommend a discussion with a chimney specialist you trust.
The patented Alkon system in a double-wall construction satisfies the most demanding requirements and is preferred as the complete solution both indoors and outdoors. Thanks to its aesthetically appealing appearance — that uses not clamp fittings — it is often used as an architectural element in modern apartment construction.

With our DW-Alkon system, you can rely on a conical jointing system (patented throughout Europe) that is based solely on a slip-fit (push together) metal joint and uses no troublesome elastomeric seals.

The double-wall system features 30-mm-of insulation that prevents the outer pipe from becoming excessively hot, thereby protecting the surroundings against damage. It is thus possible to install the flue system very close to the outside facade. For the same reason, the distance from combustible material inside the building can also be reduced considerably as well.

The insulation also ensures that temperature fluctuations and the effects of weather outside cannot adversely affect the flow of flue gases on the inside. The system is easily assembled by trained technicians and remains flexible enough even after assembly to permit problem-free modification or expansion (e.g. in an industrial application).

In addition to reliable operation — even at high positive pressures — you have a system for the future that can accommodate connection of all heating appliances regardless of the energy source you decide to use. With DW-Alkon you always have an appropriate flue system.

**Applications:**
- Appliances (solid fuels such as wood, coal, pellets etc.)
- Low-temperature boiler
- Condensing boiler
- Cogeneration units
- Emergency power generators
- Engine plants
- Bakery ovens
- Positive and negative pressure operation
- Indoor and outdoor installation possible

**Material:**
- **Inner liner:**
  - Stainless steel (1.4571/1.4404)
  - Material thickness 0.5 mm
  - Ø 80–600 mm
- **Insulating layer 30 mm**
- **Outer shell:**
  - Stainless steel, high gloss
  - Material thickness 0.5 mm, from Ø400, 0.6 mm
  - Self-supporting
- **Ready to use immediately**

**Benefits:**
- **Patented jointing technique:** Metal-to-metal seal based on a conical slip-fit (push together) joint with no additional elastomeric seal.
- **Capillary stop:** A system protected against condensate from inside and rainwater from outside.
- **Flexible:** The great variety of components means problem-free adaptation to difficult conditions.
- **Applications:** In addition to its use with normal heating appliances, the DW-Alkon system is suitable for all known situations where flue systems are needed.
- **Performance spectrum:** Flue gas temperatures up to 600° C, positive pressures up to 5000 Pa, negative pressure operation.
- **High-grade materials:** The best materials and modern manufacturing methods ensure a reliable solution for the future chimney system requirements in your home.
- **High quality:** A system with CE 0432:BPR-119938 approval, backed by production certified to DIN EN ISO 9001:2000.
- **A high degree of liberty in design:** In addition to its architecturally elegant appearance, also available in various surface finishes (high gloss, matte, brushed, painted or the exclusiveness of copper).
Besides its architectural elegance, this example also shows that there are hardly any limitations.
The double-walled, moisture-resistant DW + DW/FU is the time-tested classic with clamp fitting assembly. The system features a so-called capillary stop that prevents penetration of moisture into the insulation of the flue system from the outside. Penetration of internal condensation into the insulation is prevented by the capillary stop as well. You are thus on the safe side from a technical standpoint and can rely on a durable, long lasting system from Raab.

Joining the segments by means of a looking band is simple, reliable and has been the accepted approach in the market for years. Troublesome seals are not needed and the joints remain maintenance-free for years.

The double-wall system features 30-mm-of insulation that prevents the outer wall from becoming excessively hot, thereby protecting the surroundings against damage. It is thus possible to install the chimney system very close to the outside facade. For the same reason, the distance from combustible material inside the building can be reduced significantly as well. The insulation also ensures that temperature fluctuations and the effects of weathering cannot adversely affect the flow of flue gases on the inside.

The system is based on a modular design concept to ensure flexibility when facing structure-related requirements and is assembled on site by trained technicians.

### Benefits:

- **Proven jointing technique:** The butt joints of the segments have demonstrated their reliability over many years.
- **Capillary stop:** A system protected against moisture from within and without.
- **Rapid installation:** Easily assembled by trained technicians and often ready to use on the same day that installation is completed.
- **Flexible:** The great variety of components means problem-free adaptation to difficult conditions.
- **Performance spectrum:** Flue gas temperatures up to 400° C, negative pressure operation.
- **High-grade materials:** The best material and modern manufacturing methods ensure a reliable and durable solution for your chimney system requirements.
- **High quality:** A system with CE 0432-BPR-119929 approval, backed by production certified to DIN EN ISO 9001:2000.
- **A high degree of liberty in design:** In addition to its architecturally elegant appearance, also available in various surface finishes (high gloss, matte, brushed, painted or the exclusiveness of copper).
The patented Alkon system in a single-wall design satisfies the most demanding requirements and is preferred for refurbishment of existing chimneys. As a single-wall system for refurbishment, it is simply installed in the existing chimney shaft.

With our EW-Alkon system, you can rely on a conical jointing system (patented throughout Europe) that is based solely on a slip-fit (push together) metal joint and uses no troublesome elastomeric seals.

The system is easily assembled by trained technicians and remains flexible enough even after assembly to permit problem-free modification or expansion (e.g. in an industrial application).

In addition to reliable operation — even at high positive pressures — you have a system for the future that can accommodate connection of all heating appliances. Regardless of the energy source you decide to use, with DW-Alkon you always have an appropriate chimney system.

The system is based on a modular design concept to ensure flexibility when facing structure-related requirements and is assembled on site by specialized companies.

Product description

**Material:**
- Stainless steel (1.4571/1.4404)
- Material thicknesses: 0.6 and 1.0 mm
- Inside diameter 80–600 mm
- TIG/laser butt welded
- May be used with and without thermal insulation
- Ready to use immediately

Benefits:
- **Patented jointing technique:** Metal-to-metal seal based on a conical slip-fit (push together) joint with no additional elastomeric seal.
- **Capillary stop:** A system protected against moisture from inside and outside.
- **Flexibel:** The great variety of components means problem-free adaptation to difficult conditions.
- **Applications:** In addition to its use with normal heating appliances, the DW-Alkon is suitable for all known situations where chimney systems are needed.
- **Performance spectrum:** Flue gas temperatures up to 600° C, positive pressures up to 5000 Pa, negative pressure operation.
- **Delivered as:** Circular cross-section standard, but also available with an oval cross-section for use where space is limited.
- **High quality:** A system with CE 0432-BPR-119914 approval, backed by production certified to DIN EN ISO 9001:2000.
- **High-grade materials:** In addition to the most modern manufacturing methods, the decisive factor for the durability of the system.

Applications:
- Standard burners
- Low-temperature systems
- Condensing boilers
- cogeneration units
- Emergency power generators
- Bakery ovens
- Positive pressure application
- Negative pressure operation
- For relining existing systems
- Dry operation
- With and without thermal insulation
- Outdoor installation possible
- New construction and expansions

The horizontal part of the connecting flue is secured with an easy-to-install clamp fitting or drawing clamp (see installation/assembly instructions).
Before constructing a new tiled stove, the existing chimney needs refurbishing with an EW-Alkan system.
The single-walled, moisture-resistant EW + EW/FU is the time-tested classic for refurbishment of already existing chimneys.

Assembly of the segments by means of the spigot and socket joint is simple, reliable and has been the accepted approach in the market for years. In the event of unforeseen situations on site, the system can be cut to length without difficulty with no adverse effects on the functionality of the spigot and socket joint.

EW + EW/FU can either be installed starting from the floor of the chimney and continuing up to the top as the chimney is constructed or can be lowered “segment by segment” into the chimney from the roof using special loops.

Thanks to the great variety of standard components, the system has the flexibility needed to satisfy any requirement and is assembled on site by specialised companies.

**Product description**

- Flexible jointing technique: Functionally and may be cut to length on site.
- Flexibility: The great variety of components means problem-free adaptation to difficult conditions.
- Performance spectrum: Flue gas temperatures up to 400° C, negative pressure operation.
- Delivered as: Circular cross-section standard, but also available with an oval cross-section for use where space is limited.
- High-grade materials: In addition to the most modern manufacturing methods, the decisive factor for the durability of the system.

**Applications:**

- Low-temperature appliances
- Appliances (solid fuels such as wood, coal, pellets etc.)
- Modern appliances in residential settings, commercial premises and industrial buildings
- Suitable for negative pressure operation
- For refurbishment or cross-section reduction in existing systems
- May be used with and without thermal insulation
- Wet operation
- Dry operation
- New construction and expansions

**Material:**

- Stainless steel (1.4571/1.4404)
- Material thickness 0.6 and 1.0 mm
- Inside diameter 80–600 mm
- TIG/laser butt welded
- Ready to use immediately

**Benefits:**

- **Flexible jointing technique:** Functionally and may be cut to length on site.
- **Flexibility:** The great variety of components means problem-free adaptation to difficult conditions.
- **Performance spectrum:** Flue gas temperatures up to 400° C, negative pressure operation.
- **Delivered as:** Circular cross-section standard, but also available with an oval cross-section for use where space is limited.
- **High-grade materials:** In addition to the most modern manufacturing methods, the decisive factor for the durability of the system.
- **High quality:** A system with CE 0432-BPR-119930 approval, backed by production certified to DIN EN ISO 9001:2000.
EW+EW/FU – the classic for refurbishing existing chimneys.
LB Universal is a lightweight system for erection of chimneys in new construction and when refurbishing. In conjunction with the EW stainless steel chimney system, this shaft system represents the optimal complete solution.

It fulfills all requirements for thermal insulation and fire protection and is suitable for installation in multi-storey housing. Passing from one storey to another is not a problem with LB Universal. With its low weight and compact size, it even satisfies the stringent requirements for use in listed historic buildings, which frequently do not allow installation of a new foundation. With LB Universal you can almost always dispense with a foundation.

The small required space of the shaft with an outer wall of only four centimetres gives the planner flexibility with the design and simplifies the decision regarding connection of an additional heating appliance such as a tiled stove, for instance.

Thanks to the dry construction method, installation is extremely straightforward. LB Universal can be finish-treated immediately after installation and heated straight away.

Product description

LB Universal is a lightweight system for erection of chimneys in new construction and when refurbishing. In conjunction with the EW stainless steel chimney system, this shaft system represents the optimal complete solution.

It fulfills all requirements for thermal insulation and fire protection and is suitable for installation in multi-storey housing. Passing from one storey to another is not a problem with LB Universal. With its low weight and compact size, it even satisfies the stringent requirements for use in listed historic buildings, which frequently do not allow installation of a new foundation. With LB Universal you can almost always dispense with a foundation.

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Thanks to the dry construction method, installation is extremely straightforward. LB Universal can be finish-treated immediately after installation and heated straight away.

Material:
- Material, outer shell: Silicate fibre fire protection plate
- Chimney system: inner liner, Raab-EW, Stainless steel (1.4571/1.4404)
- Material thickness 0.6 mm
- Inner diameter 113–350 mm
- Fire resistance (90 minutes fire resistance time outside/outside)
- Terminal resistance \( (m^2 K/W) = 0.676/200^\circ C \)
- Quality controlled and certified to CE 0432 BPR 119916

Applications:
- The complete solution for use in buildings
- For all standard burners
- For refurbishment or new construction
- For additional heating appliances such as tiled stoves, for instance
- For single- and multi-family housing houses or buildings
- Also suitable for multi-storey housing houses or buildings
- For indoor use
- Offsets up to 30 degrees possible

Benefits:
- For low-energy- or Passive house construction: Meets all requirements.
- Lightweight: Most often no static load-related measures such as foundations, for instance, are needed.
- Optimal fire protection: Safety as the result of a fire resistance time of 90 minutes.
- High quality: For long-lasting, reliable functioning.
- Fast installation: Easy to assemble that the flue system can usually be heated on the day of installation.
- The complete solutions from a single source: Compatible with flue systems and accessories from Raab, so that you can plan without difficulty.
High-grade interior behind a lightweight exterior wall: LB Universal can be placed wherever you need it.
This shaft system for flues (oil/gas) is equally well-suited for refurbishment and new construction and complies with most national building regulations.

The compact size of this shaft system takes up little living space and can be installed quickly and efficiently due its dry construction method, heating possible straight away after installation is completed. Plastering or wallpapering to finish the surface is also possible immediately after installation.

The entire system is pre fabricated to your requirements and can also be ordered with pre-installed cleaning openings and T- pieces, which permits even faster installation on site. For various special cases, fire resistance 30 min. offers versatility through it accessories such as support brackets, for instance.

**Material:**
- LB shaft fire resistance 30 min.
- Material: Fibre silicate fire protection plate
- Wall thickness: 25 mm
- Insulation comparable to 11.5 cm brickwall
- Fire resistance 30 min.
- Terminal conductivity ($\text{m}^2\text{K}/\text{W}) = 0.12$
- Outside dimension: 150–400 mm
- Inner dimension: 100–350 mm
- Larger sizes available on request
- Overall height between 300 and 2500 mm
- A variety of individual chimney top cladding available.

**Applications:**
- Shaft for flue pipes
- Low level buildings
- New construction und renovation
- For indoor use
- Offsets of up to 30° possible (45° with positive pressure)

**Product description**

**Benefits:**
- **Joining technique:** Internal connectors made of stainless steel
- **Efficient thermal insulation and fire protection**
- **Space-saving**
- **System:** Factory made and packaged
- **Segments with inspection openings and connecting sleeve available**
- **Custom-made designs possible, square cross-section available on request**

**Cross-section through the LB Shaft**

**LB shaft Fire resistance 30 min. single-wall flues for low level buildings**

**A variety of individual chimney top cladding available.**
This shaft system for flues (oil/gas) is well-suited for refurbishment and new construction in multi-storey housings. It complies with the draft ordinance for use of heating appliances in multi-storey housings (see LB Shaft with fire resistance of 30 min. for low-level buildings).

The compact size of this shaft system takes up little living space and can be installed quickly and efficiently due its dry construction method, heating possible straight away after installation is completed. Plastering or wallpapering to finish the surface is also possible immediately after installation.

The entire system is pre-fabricated at the factory to your requirements and can also be ordered with pre-installed cleaning openings and connection openings, which permits even faster installation on site. For various special cases, LB Shaft with a fire resistance of 90 min. offers versatility through its accessories such as support brackets, for instance.

### Product description

- **Material:**
  - LB shaft Fire resistance 90 min.
  - Material: Fibre silicate fire protection plate
  - Wall thickness: 40mm
  - Insulation comparable to 24 cm brick
  - Fire resistance time: 90 minutes
  - Thermal conductivity (m² K/W) = 0.22
  - Outside dimension: 180–430 mm
  - Inner dimension: 100–350 mm
  - Larger sizes available on request
  - Overall height between 300 and 2500 mm
  - A variety of individual chimney top cladding available
  - High quality: Subject to continuous quality control

- **Applications:**
  - Shaft for flue pipes
  - Multi-storey housings
  - New construction and renovation
  - For indoor use
  - Offsets of up to 30° possible (45° with positive pressure)

- **Benefits:**
  - Joining technique: Rabbet joint
  - Efficient thermal insulation and fire protection
  - Space-saving
  - System: Factory pre-fabricated, and packaged
  - Segments with inspection openings and connecting sleeve available
  - Custom-made designs possible, square cross-section available on request

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Example of installation with offset, from cellar to past the roof.

Cross-section through the LB Shaft fire resistance 90 min.

Double-wall system LB Shaft fire resistance 90 min. suitable for multi-storey housings.
LB Multishaft is a lightweight, space-saving and multi-functional shaft system. It is compatible with the EW-Alkon and EW+EW/FU chimney systems and can simultaneously provide space for installation of housing technology in an easily accessible and central location. In addition, it can provide the supply air for balanced flue systems used with solid fuel-burning stoves (with EW-Alkon) and make them independent of room air. In low-energy and Passive houses with controlled ventilation of the living space, this can ensure reliable operation of the burner.

As LB Multi EW it can be used as a double-wall chimney.

This shaft system is equally well-suited for new construction and refurbishment and complies with all requirements for thermal insulation and fire protection and can be installed to a height of several storeys and through the roof. The material can be easily cut using a commercially available keyholesaw and as a result can be trimmed and installed on site without difficulty. Due to the dry construction method, LB Multishaft can be installed quickly and finish-treated immediately. With an outer shell of only 45 mm, it is very slim compared to brick walls and its minimal space requirement gives planners flexibility with design.

Depending on requirements, this system is available in a single-flue or double-flue version and fulfils up to three functions simultaneously.

Product description:

Material:
- 45 mm calcium silicate fire protection plate
- Fire resistance time 90 minutes

Inside dimensions:
- Single-flue:
  - 150 x 150
  - 200 x 200
  - 230 x 230
  - 270 x 270
  - 340 x 340

- Double-flue:
  - 200 x 200 + 200 x 140
  - 270 x 270 + 270 x 180
  - 270 x 270 x 240

Applications:
- The flexible complete solution for use in buildings
- Also suitable for multi-storey housing
- Stack system for flue pipes, supply air and utility lines
- For most appliances
- For new construction or renovation
- As outer shell for custom build chimneys according to EN 15287-1
- To ensure reliable operation of appliances in buildings with controlled ventilation
- As a balanced flue system for room-sealed solid fuel-burning stoves

Benefits:
- Maximum stability: shaped edges ensure the greatest possible stability.
- Lightweight: As a rule, no static load-related measures such as foundations, for instance, are needed.
- Space-saving: There is more room available and it can be installed where space is limited.
- Fast installation: So easy to assemble that the chimney system frequently can be finish-treated on the day installation is completed.
- Flexible: The path the shaft takes can be adjusted easily for problem-free installation under difficult local conditions.
- Material: Reassuringly safe material characteristics, for both thermal insulation and fire protection.
- High quality: For long-lasting, reliable functioning.
- Unproblematic: Assistance from experienced technicians on site when applying for approval.

LB Multishaft is easy to work with and can be trimmed with commercially available tools.
Multistack is the way to go!
For fresh air to the stove or fireplace, or for routing electric and other utility lines up to other storeys.
Chimney top cladding — a fountain of youth for your chimney.

As the market leader for chimney systems, we have been setting trends and making standards for years. At the same time, we always offer the optimal solution for new systems, refurbishment and, with our range of accessories, much more as well. Chimney top cladding is an opportunity to professionally extend the life expectancy of your chimney top by years, so that expensive refurbishment can be dispensed with. Thanks to the trouble-free dry construction method used for installation, your chimney is reliably protected at little cost against weathering and penetration of condensate for a long time. The chimney is cleaned, re-jointed and clad with a custom-manufactured chimney top cladding. The structural panels of the chimney top cladding rest on supports that are adjusted to fit your chimney; additionally, insulation can be placed in the space in between. A stainless steel cover plate with a drip edge caps the cladding and diverts condensation and rainwater. As a result, your chimney is protected against the damage caused by moisture and is fit again for many worry-free years. Since the chimney terminal accentuates the appearance of your house, many surface treatments are available to select from. Our range extends from the texture of natural materials such as schist, slate or brick to the ageless appeal of stainless steel or titanium zinc alloy cladding. With chimney chimney top cladding from Raab, you are choosing a product that meets a high quality standard and underscores our market position.

Using the most modern manufacturing methods and ongoing quality control, we achieve our greatest objective daily: satisfied customers.

Terminals

Terminals set on the chimney represent an additional way to protect the chimney against moisture. Like a roof, they protect the mouth of the chimney from rain and snow. Depending on the type of construction and the chimney height, chimney terminal also fulfil other functions. Thus, they protect against wind pressure, for instance, and in this way regulate the draft or prevent the undesirable accumulation of leaves or bird droppings. To top off your new chimney, you can also select from fluted caps in a variety of materials to suit your personal taste. Here, too, we offer the appropriate solution for every requirement with the quality you expect from Raab.

Applications:

- For long-term protection against weathering
- For an overall new appearance to complement new roofing.
- As an economical alternative to an custom solution provided by a tradesman

Benefits:

- Extended life time — preserves the material used in construction and ensures reliable functioning for years.
- Easy, custom installation — factory-made and dry construction method minimise work on site.
- Protection against weathering — by being protected against moisture, the integrity of the material is retained.
- Protection against penetration of condensate — as the exterior complement to refurbishment work on the chimney.
- Optimisation of appliance performance — chimney terminals stabilise draft and thus combustion.
- A new look — the chimney has a completely new external appearance in a variety of styles.
Behind the appealing cladding, there is either a shaft system or the existing material of a chimney worth protecting. A stainless steel terminal and the classic chimney terminal were selected as terminal here.
The terminal stabilises the draft in the chimney and optimises combustion. Especially when used with atmospheric appliances (i.e. where the combustion air is not supplied by a fan) the Raab terminal EN Plus optimises performance of your system by providing for more uniform burning. In addition to these benefits, the reliability of the appliance increases, since critical wind conditions have hardly any effect on the draft. To simplify maintenance performed by the chimneysweep, the terminal can be opened easily thanks to the quick-release catches, without tools, providing easy access to the chimney.

By using chimney extensions, it is possible to influence the performance of the chimney system in order, for instance, to react to changing requirements regarding the heating appliances.

Applications:

Terminal EN Plus:
- For use when wind conditions near the chimney top are critical
- For chimneys designated T 600 N1 D

Terminals:
- Protect against moisture
- Protect against the wind
- Protect against leaves
- Protect against bird nests
- Stabilising chimney draft
- Aesthetics

Chimney extension:
- Adjust the flue system to the heating appliance
- Increase the draft in the chimney

Benefits:

- **Stabilises the draft** — as a result of the outstanding aerodynamic characteristics, critical wind conditions (developed in a wind tunnel) have hardly any effect on the draft in the chimney and provide for uniform burning.
- **Increases heating system performance** — a uniform draft in the chimney optimises combustion and increases appliance performance as the result of uniform burning.
- **Improves reliability** — the terminal deflects critical wind gusts, back pressure resulting from an unfavourable gust of wind is thus reduced.
- **Reduces, if necessary, the required over-all height of the chimney** — as a result of the technical characteristics of the Raab terminal EN Plus, the wind pressure at the top of the chimney may be reduced.

The terminal EN Plus is the first product on the European market that exhibits the aerodynamic characteristics listed in DIN EN 1856-1. As a result, the overall height of the chimney may be reduced.
The innovative terminal EN plus is a unique component that has been developed using the principles of fluid mechanics. It ensures a constant draft even when wind conditions are critical, protects against downdrafts and can possibly reduce the overall chimney height.
Applications.
Continually changing requirements regarding the appliances require flexible chimney systems. Many benefits and features argue in favour of a chimney system made of stainless steel. Modernising the heating system can make refurbishment of the chimney necessary and satisfy almost all demands in new construction. Requirements associated with fire protection, historical preservation or static load concerns are just as easily addressed as architectural considerations or the long standing wish for a wood-burning oven. Additional functions such as room sealed applications or providing space for installation of housing technology can, of course, be fulfilled as can special and challenging industrial requirements.

The following presents an overview of the most common applications ...
Example of installation

Refurbishment of the chimney may become necessary as the result of modernising the heating system or parts of the building. Modern heating systems operate with a high degree of efficiency, as a consequence of which condensation forms because of the low temperature of the flue gas and attacks the chimney.

The visible result of this process can be seen as unsightly black streaks on the walls, a condition the specialist calls penetration of condensate. These can also appear with a deteriorated chimney, in which case you face the decision to either refurbish the existing chimney or replace it.

In the case of refurbishment, a single-wall stainless steel liner is inserted into the existing chimney; systems that we have specifically developed for this purpose can be installed without difficulty.

If the chimney is in a listed historic building and can no longer be saved, then a shaft system is available as an easy replacement. Depending on the heating system, building or additional needs, four different systems are available. All systems have compact dimensions and a low weight in common, so that in most cases foundations can be dispensed with and additional living space gained.

New construction

The dimensions of the chimney system are established together with your contractor; he will ask you about where you want to operate what type of heating unit. Do you want to use this opportunity to satisfy your wish for a tiled stove or an wood-burning fireplace, or do you want to reserve this option for the future?

Other considerations are of a more practical and aesthetic nature. Where should the chimney be located, inside the house or on the facade? Do you want to consider a stack system and benefit from the opportunity to route housing technology to all storeys at an easily accessible and central location? Do you enjoy the idea of running the chimney system up the facade and placing emphasis on a gleaming architectural accent? After all the decisions are taken, your Raab chimney system still remains flexible, durable and reliable. Suitable for outdoor installation are the DW-Alkon or the DW-DW/FU, which differ from one another in terms of field of application and, above all, the different jointing techniques.

Depending on the application and any possible additional functions, if you decide in favour of the classic location and place the chimney at the centre of the house, you will find exactly the right solution for your house among the 4 different shaft systems.
Expansion

While refurbishment replaces an old chimney system with a new one and new construction involves taking the chimney into account during the planning phase, renovation means installing a new chimney in an existing building. Usually the need arises from putting rooms to a new use or incorporation of an additional heating appliance such as a tiled stove or fireplace. With modern stainless steel flue systems or lightweight chimneys, the anxiety associated with such wishes disappears completely. If in the course of planning the renovation the wish or the need for an additional heating appliance arises, the situation can be resolved easily with Raab chimney systems. Thanks to the dry construction method, the chimneys are suitable for any room and, because of their low weight, make static load-related measures such as a costly foundation unnecessary and can also be erected on floors supported by wooden beams.

Industry

Stainless steel chimney systems from Raab can also withstand the harshest conditions. Chimney systems for industrial applications much satisfy much more demanding requirements than those used in residential construction. Engine plants generate flue gas temperatures of up to 600°C and the ovens in large bakeries need complex flue systems and well thought out complete solutions. Flue pipes for industrial applications do not differ in principle from the chimneys used in conventional residential construction. Although the applications require larger diameters and greater chimney heights, installation and materials used are identical. Depending on the application, systems for industrial use are planned and completed by Raab. For special challenges, we have special solutions ready.

Protection against weathering

Masonry chimneys that were simply accepted as a matter of course only a few years ago are subject to ongoing deterioration due to exposure to weather. Rain can enter through the top of the chimney and, through reaction with the deposits there, form an aggressive substance that destroys the chimney over the course of years.

Chimney top claddings protect the existing masonry for many additional worry-free years. Terminals and fluted caps deflect rain and protect against internal moisture. If proper functioning of the chimney is impaired by the wind, an appropriate chimney terminal as well as the terminal EM plus or a chimney extension can ensure reliable operation.
Our partners are your contacts. For this reason, we value partners who share the same commitment to quality and service and with whom we can cooperate. Our philosophy is to strive to provide the highest product quality, a complete proposal and competent consultation, which together then lead to the best result. Installation of a new chimney system is a responsible undertaking and we observe again and again that dedicated companies are more likely to find their way to Raab instead of Raab having to search for them. The quality associated with an artisan’s work requires the best material and vice versa; this is how we see it and how our partners see it. The quickest way to find the company to contact is to visit our page on the Internet. You postal code and the desired search radius will find the appropriate contact on the basis of the following categories: Chimney refurbishment and new construction, chimney gallery, tiled stove construction, specialist for chimney systems, industrial chimney systems, noise reduction and specialty retailers.

As a company, Raab can look back on a tradition of 100 years and managed to be successful in both good times and bad. Today it is a market leader and expanding throughout Europe. Many factors and conditions made this possible. One, however, was always indispensable: quality. Raab uses the forming techniques found in the automotive industry, has its own development department and, through innovative products and manufacturing methods, regularly contributes to the refinement of technical standards. Since 1997 Raab has had a certified quality management programme, which means that the company is subject to strict European quality audits and is committed to renewing certification as necessary. This is only reasonable and appropriate for a safety-related product, since the quality of our flue systems can be seen not only in their workmanship and long life, but also in the reassuringly safe feeling that results from knowing that your heating system in connected to a Raab chimney.
Internet

We live in the age of the world wide web and are participating in this development by having our own extensive website. At the same time, we do not want to re-invent the wheel, but instead use the opportunity and, in addition to an appealing presentation of our company and its products, also wish to address current needs. Accordingly, Raab offers a refreshing platform that presents in an easily understood, clear and competent manner a great deal of information on the topic of flue systems for both the technical specialist and contractor alike.

www.raab-gruppe.de
The end of this brochure is the beginning of an up-to-date acquaintance with modern heating technology. Chimney systems from Raab are the cornerstone for the use of environmentally sound systems and offer solutions for both everyday and special situations involving the discharge of flue gas.