



CORPEX[®]-core Technology



CORPEX[®]-core Plate-Type Heat Exchangers



APEX® & CORPEX® Plate-Type Heat Exchangers

APEX Group is specialized in designing and manufacturing high quality heat transfer equipment.

CORPEX®, A-CORREX® & APEX-delfino® plate-type and tubular exchangers are designed to bear the most extreme requirements. We provide innovative engineering solutions for high performing heavy-duty gas/gas and gas/liquid equipment for heat recovery and environmental projects.

Patented technology, coupled with more than 45 years of experience in heat transfer, provides APEX Group with a solid technical foundation and a strong competitive edge in today's market. As a result of substantial growth, APEX Group has been able to expand its fabrication, engineering and research and development facilities, to satisfy 300+ customers' requirements with tailored designs.

APEX® & CORPEX® Plate-Type Heat Exchangers

The proprietary design plate-type heat exchangers developed, manufactured and supplied by APEX Group, are heavy-duty exchangers for handling large volumes of gases for heat recovery and gas handling applications.

Characteristics:

- Compact design
- Customized and modular design
- Wide material selection
- Trouble-free and user-friendly operation
- Low operating and maintenance cost

Free-flow™ Technology

The gas flow between smooth parallel plates is a pure plug-flow uniformly distributed over the entire width of the plate. There is no flow separation and the velocity profile is well defined: a thin laminar sub-layer adjacent to the wall and a turbulent flow core.

This flow configuration results in a relatively low level of energy dissipation. Therefore, this flow type is the most efficient, resulting in an optimum compromise between a high heat transfer coefficient and a reduced pressure drop.

Main advantages:

- Parallel smooth plates
- Reduced obstruction in flow path
- Minimized fouling
- Easy to clean

The net effect is that the required heat transfer area, at same thermal duty and same pressure drop, is less. The smooth-plate design requires 20-30% less heat transfer surface, particularly for large installations.

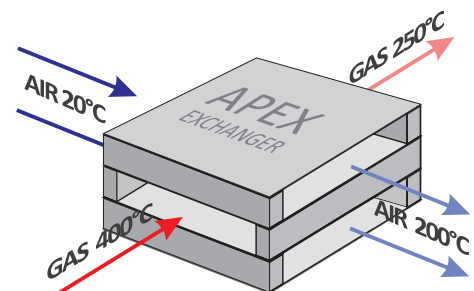
Main Applications:

- Combustion Air Preheaters
- Gas/Gas Reheaters
- Gas Coolers
- Heat Recovery from Incinerators
- Feed/effluent Exchangers
- DeNOx Exchangers

Main Industries:

- Petrochemical Industry
- Power Industry
- Pulp & Paper Industry
- Ammonia & Fertilizers Industry
- Process Industry
- Metallurgical Industry

APEX® Heat Transfer Concept



Uniform Flow between Smooth Plates



Free-flow™ Technology

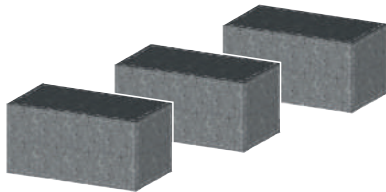


CORPEX[®]-core Technology

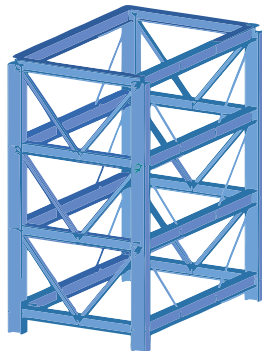
Advantages of CORPEX[®]-core Technology:

- Replaceable plate core blocks
- Flexible modular design
- Complies with domestic supply regulations
- Optimal solution for limited budget
- Reduced transport cost
- Faster delivery time

CORPEX[®]-core Blocks



CORPEX[®]-core Structure



APEX Group prides itself in finding solutions for its customers and released CORPEX[®]-core Technology to give customers around the world the flexibility and opportunity to use high-quality and custom-designed exchanger on a tight budget. This product is a modern day answer to the harsh economic environment and local governmental regulations.

CORPEX[®]-core Product consists of the core element extracted from our well renowned CORPEX[®] Plate-type Heat Exchanger, which is uniquely designed to the customers' specifications and manufactured to the same high standards in APEX Group's fabrication facilities.

APEX Group and Customer collaborate on Project execution

APEX Group supplies both the core exchanger and the mechanical design, including the erection procedure, for the structure. This ensures the compatibility, while maintaining a tight budget, as it allows customers to build the structure on their own terms within the design guidelines, in harmony with CORPEX[®]-core blocks supplied by APEX Group.

CORPEX[®]-core Structure

APEX Group's experienced engineers work in close collaboration with the Customer to ensure punctual and correct delivery to site. The structure is fabricated by the Customer according to APEX Group's detailed drawings and instructions.

APEX Group ensures open and responsive communication channels throughout the site activities to avoid all possible delays during the erection phase.

CORPEX[®]-core Key Erection Steps



Max. Operating Temperature	Typical Material
425°C	Mild Carbon Steel
540°C	Corten/A606-4/PATINAX (STEN)
800°C	SS304 (SUS304)
Up to 900°C	253MA

Technical Specifications:

- Typical design temperature: up to 900°C
- Typical pressure drop: 0-0.1 Bar
- Standard design pressure: up to 0.5 BarG
- Special design for higher pressures
- Typical plate thickness: 0.8 to 6.0 mm
- Duty range: unlimited
- Virtually 0% leakage



“APEX Group is dedicated to offering engineering solutions, not just a commodity.”

Mircea Dinulescu, Founder of APEX Group

Company Profile

APEX Group is specialized in designing and manufacturing high quality heat transfer equipment. CORPEX®, A-CORREX® & APEX-delfino® plate-type and tubular exchangers are designed to bear the most extreme requirements. We provide innovative engineering solutions for high performing heavy-duty gas/gas and gas/liquid equipment for heat recovery and environmental projects.

Experience and Vision

We encompass 45+ years of experience and expertise of our founder, Mr. Mircea Dinulescu, and share his vision - **to research, create and provide engineering solutions** for heat transfer industrial applications. To this day, our *Credo* remains unchanged, creating the strong foundation for APEX Group’s position in the international market:

Started in 1990 as a small independent business, APEX GROUP will grow into a reputable designer and manufacturer of high quality low-priced industrial heat transfer and combustion equipment for the international market operating according to the quality principles laid out by international standard ISO 9001.

M. Dinulescu, 1991

Quality and Innovation

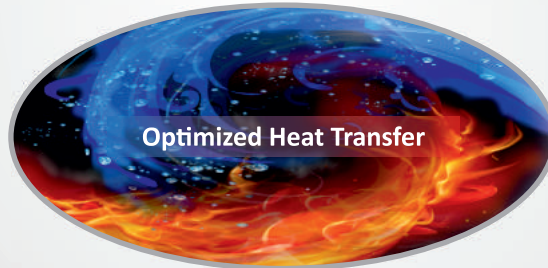
APEX Group’s strength consists of know-how, patented technology, professionalism and leading-edge engineering. Our Research and Development Department supports APEX Group’s activities by providing new solutions for continuously upgrading APEX Group’s products and guaranteeing optimal heat transfer, long lifetime, trouble-free and user friendly operation.

Customers Worldwide

We take pride in being a family-owned company, which allows us to build close connections with our customers and guarantees a personal approach to each project. We strive to support our customers by engaging in dialogue and developing long-term partnerships. Our company is renowned worldwide and naturally we deliver to every corner of the world.

Broadening Horizons

By encouraging feedback from customers, APEX Group develops solutions and products that anticipate market needs. To materialize our concepts we have expanded our Engineering, Research and Fabrication facilities. Apex engineers are continuously keeping up to date with the newest industrial developments in order to provide optimum design for our customers.



+31 (0)70 300 42 42

info@apexgroup.eu www.apexgroup.eu

Euro-Apex B.V.
Technology Centre
Westeinde 10
2275 AD Voorburg
The Netherlands
tel: +31 70 300 42 42

Apex-Research B.V.
Research & Development
Westeinde 10
2275 AD Voorburg
The Netherlands
tel: +31 70 300 42 42

America-Apex B.V.
Contractor
Westeinde 10
2275 AD Voorburg
The Netherlands
tel: +31 70 300 42 42

Benelux-Apex B.V.
Contractor
Westeinde 10
2275 AD Voorburg
The Netherlands
tel: +31 70 300 42 42

Czechia-Apex B.V.
Contractor
Westeinde 10
2275 AD Voorburg
The Netherlands
tel: +31 70 300 42 42

Silesia-Apex Sp. z o.o.
Contractor
Zawiszy Czarnego 4/4
44-100 Gliwice
Poland
tel: +48 32 381 50 50

Romania-Apex Heat-Transfer S.R.L.
Contractor
Aleea Duvenbeck 3
507055 Cristian, Brasov
Romania
tel: +40 26 847 11 99

Apex-Supply s.r.o.
Material Service Centre
Olomoucka 3419/7, Area Amulle
61800 Brno
Czech Republic
tel: +420 516 777 241

Valachia-Apex S.R.L.
Fabricator
Aleea Duvenbeck 3
507055 Cristian, Brasov
Romania
tel: +40 26 847 11 99

Moravia-Apex, spol. s r.o.
Fabricator
Olomoucka 3419/7, Area Amulle
61800 Brno
Czech Republic
tel: +42 541 424 883