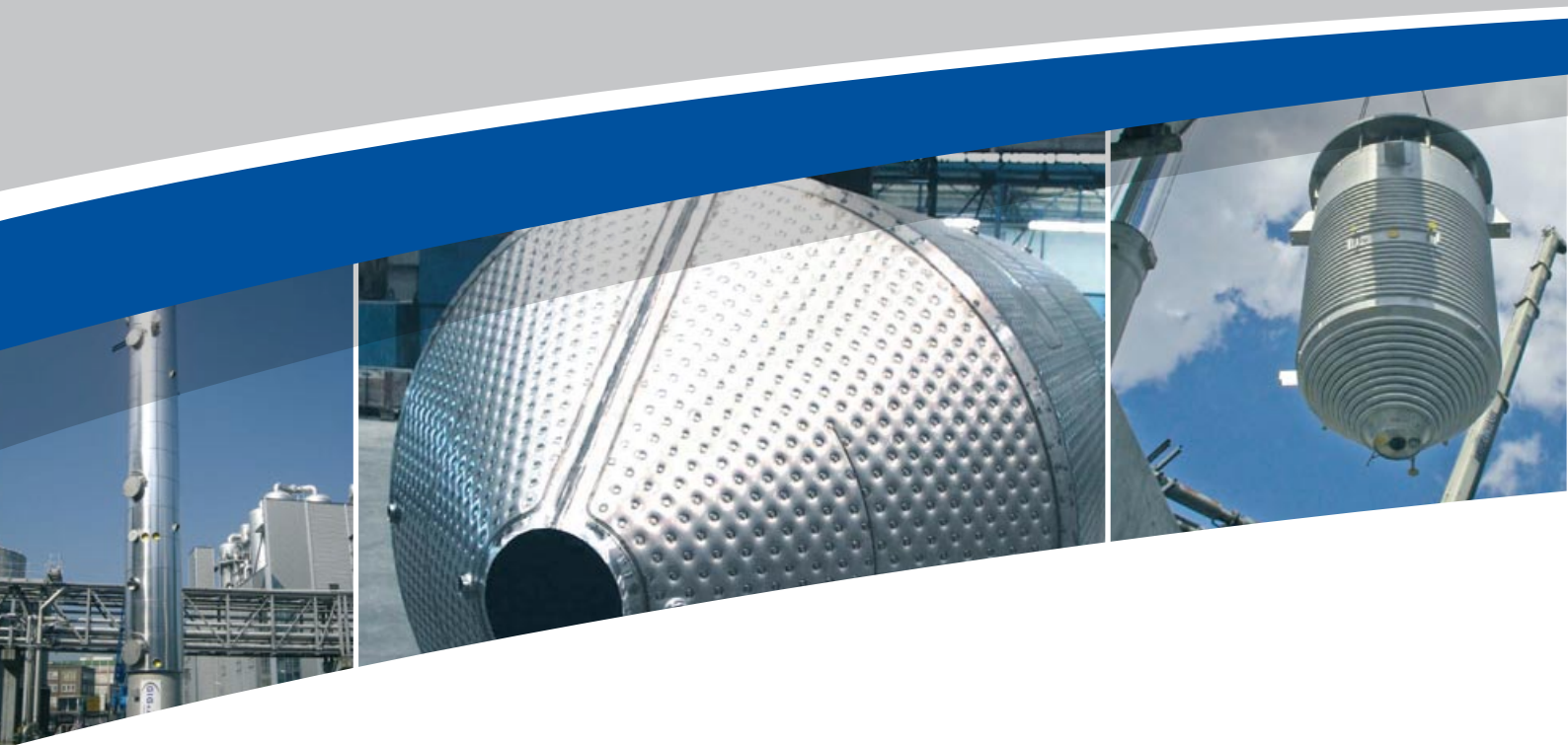




Special Process Equipment



About our company

GIG Karasek is a leading European supplier of system design and turnkey plant construction in the field of process evaporation, thermal separation technology and equipment and machinery for the chemical, pharmaceutical, food ingredients, pulp & paper, petrochemical, and related allied industries.

The advantage for our customers is our ability to be your Single Source Partner for all critical project stages - from basic engineering through manufacturing of key components and final assembly and erection of the entire plant - thus assuring successful implementation and economic execution within a tight project schedule.

This means that improvements and alterations in scope of supply are accomplished in the shortest time span and with minimal cost impact. The close cooperation of our engineers and production experts with clients means that further refinements remain consistently a matter of course.

GIG Karasek has more than 60 years of experience in the construction of vessels and machines for the chemicals, pharmaceutical, paper, pulp, and food industries.

As a client you will tap into the resources of a dynamic and lean organizational structure comprised of highly skilled technical experts who remain a pleasure to work with and can guarantee efficient realization of your projects. The wealth of experience and in-depth competence of our people in process engineering and successful plant construction are the foundation of a company which never will lose sight of the future.

***We get
the best
out for you...***

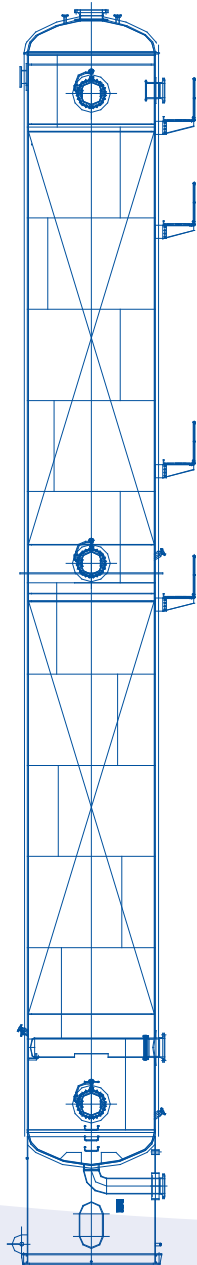


Range of Services in Special Process Equipment

We manufacture vessels weighing up to 100 t per unit. Generously sized workshops, several crane systems and powerful machines pave the way for extremely efficient and flexible production. Our particular strength is the processing of high-quality materials as well as their mechanical machining.

A guarantee of our quality is the extraordinary vertical integration, which is subject to permanent process control.

Weight up to	100 to	Machining	Vertical turning in boring mill: Ø 3000 mm x 3000 mm height Centre lathe: Ø 600 mm x 6000 mm length Straightening press: 400 to Various universal milling machines and radial drilling machines
Max. thickness of plates	50 mm		
Materials	high temperature resistant steels heat resistant steels clad steels (roll or explosive cladding, weld cladding) all nickel-based alloys Titanium: Gr. 1, 2, 7, 11 rustproof and acid-proof steels duplex steels	Certifications	Pressure Equipment Directive 97/23/EU ASME U, U2 Stamp AD-HP0 certification SQL (CHINA) DIN 18800 major certification of suitability
Welding methods	UP, TIG, MAG, MAG-flux-cored wire, TIG orbital for pipe or tube connections		
Test methods	MT, PT, VT, RT, UT		
Heat treatments	Stress-relief annealing with piece sizes of 3000 x 2000 x 15,000 mm in the oven		
Surfaces treatments	pickling and passivating up to grinding or e-polishing Ra < 0.4 µm		
		Assembly / Service	
		Our committed installation team is available for the assembly of our vessels and plants. A detailed assembly plan that is coordinated with you ensures smooth and reliable commissioning of your plant.	



Columns

Range of services	From our own process-related design with a performance guarantee to manufacturing from customer drawings
Max. length	Up to 35 m workshop production, beyond this with construction site completion
Max. diameter	approx. 4,500 mm
Fittings	Usual fastening options for distributing equipment, support grating, demisters, etc.
Attachments	Round platforms Segmented platforms Climbing ladders

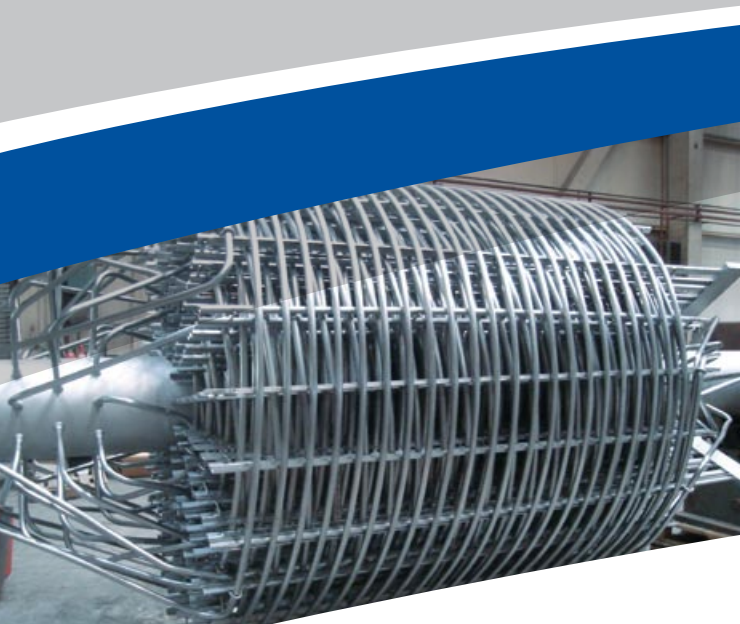


Pressure Vessels

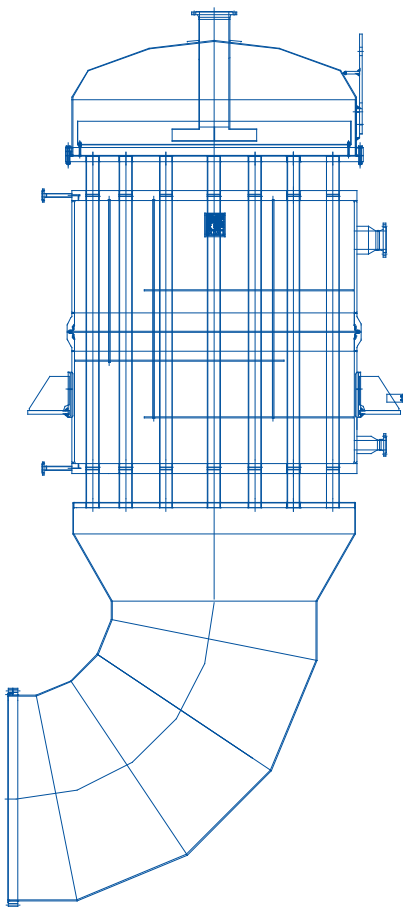
Reactors

Configuration	With half pipe coils, special profiles or jacketed pipe bundles, pipe coils or thermoplates From mill-finished, pickled to electro-polished Ra < 0.4 µm
Max. diameter	approx. 4,500 mm
Max. wall thickness	50 mm
Max. piece weight	100 to
Configuration	stainless steel, clad, or lined
Surfaces, inside	pickling and passivating up to grinding or e-polishing Ra < 0.4 µm
Surfaces, outside	pickled or blast cleaned and coated

Configuration	With half pipe coils, special profiles or jacketed pipe bundles, pipe coils or thermoplates From mill-finished, pickled to electro-polished Ra < 0.4 µm
Max. diameter	approx. 4,500 mm
Max. piece weight	100 to
Heating and cooling, outside	Half pipe coils Jackets Pillow plates
Heating and cooling, inside	Pipe coils Pipe bundles Thermoplates
Internals	Flow breakers Feed pipes etc.
Agitators	Delivery according to customer specifications



Tube Bundle Heat Exchanger



◀ **Most modern
weld-in and roll-
in possibilities**

◀ **With and
without heat-
related design**

Max. diameter	4,500 mm
Tube bundle length up to	24 m
Max. piece weight	100 to
Designs	Fixed plate exchanger U-tube exchanger Floating head exchanger Safety heat exchanger with double tube sheet design Falling film evaporator with GIG Karasek distribution system or liquid charging system at the request of the customer
Tube-tube sheet connections	Most modern weld-in and roll-in technology
Heat-related design	Possible with company's own process technology

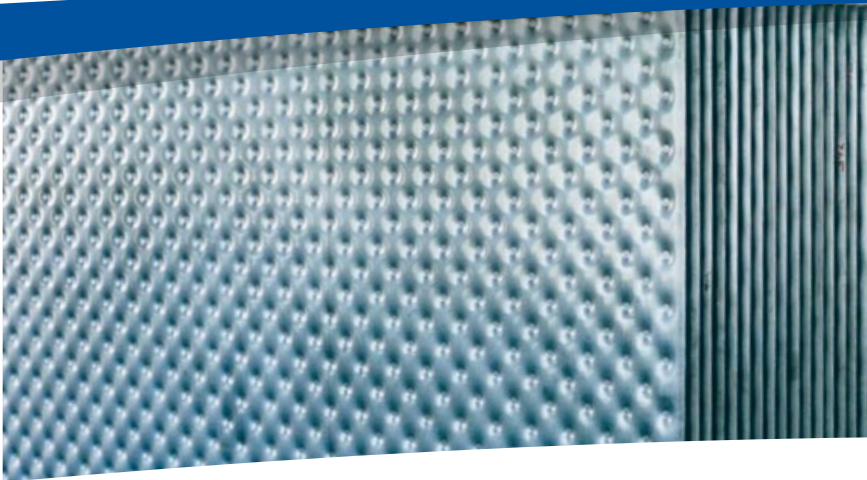
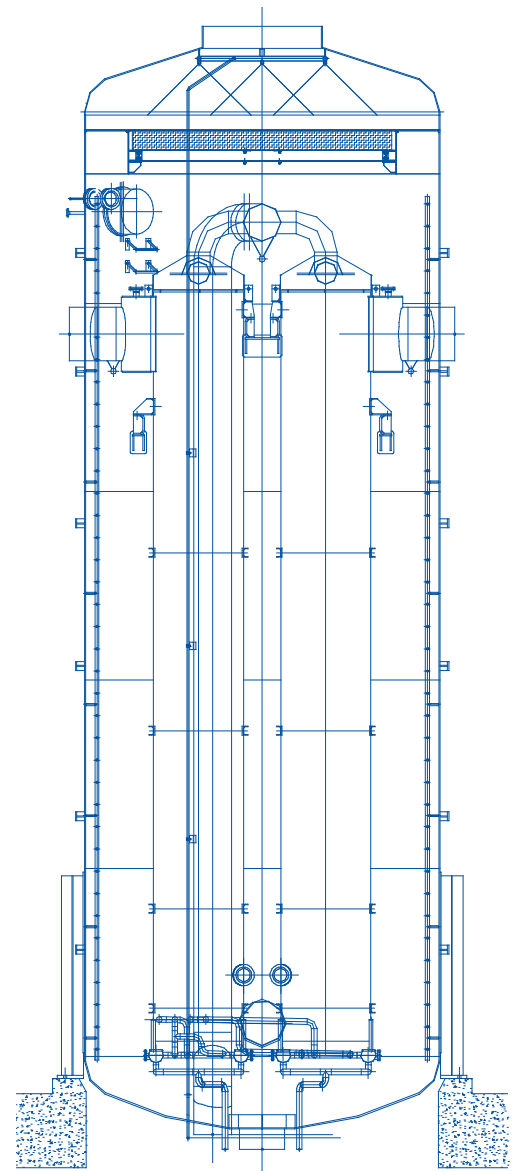


Plate Falling Film Evaporator



Max. diameter	4500 mm (beyond this, production on site)
Max. piece weight	100 to (for more than 100 to, the plate packets will be built-in onsite)
Bundles	Max. length: 10.10 m Max. width: 1.20 m Max. height: 24.00 m
Standard bundle dimensions	1218 x 10110 mm and 1218 x 7315 mm
Standard materials	1.4306, 1.4307, 1.4435, 1.4404, 1.4539, 1.4462
Welding methods	Resistance spot welding, tungsten inert gas welding

Pilot Plant Station - the Research Center of GIG Karasek

GIG Karasek's new Pilot Plant in Gloggnitz is the most comprehensive Evaporation and Molecular Distillation Center in the world.

The complete set of Unit Operations in the Pilot Plant includes Falling Film Evaporation, Forced Circulation Evaporation, Thin Film Evaporation, Short Path Evaporation and Drying Systems. For each Pilot Test a unique equipment set up and testing protocol is offered for customer review and approval prior to testing.

We can develop your process, generate real process operating data, optimize your design, and formulate your new products under GIG Karasek expert supervision. We can also generate samples for evaluation and testing, and can achieve complete demonstration of equipment. All this can be done before the expenditure of capital.

Over the years, we have found that the experience of hundreds of test runs and the resulting results of these test runs have given our customers the information to make the right decision -
the decision to use the technology of GIG Karasek.



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***We get
the best
out for you...***