









6 | preliminary design phase

8 CONSTRUCTION PHASE



ABOUT

U-kon Engineering is a leading manufacturer of rear ventilated facade systems made of aluminum and stainless steel. Over the years U-kon has become an expert in design, development and implementation of rear ventilated facade systems.

U-kon design bureau provides engineering support to engineers and architects. Our goal is to be an innovation leader in the area of technology and developing facade building. U-kon is focused on products quality and reliability which brings us in line with ecofriendliness and energy conservation. This is the main reason why leading developers and architectural offices choose U-kon.





Benefits of using U-kon systems

The substructure systems need to meet many requirements by architects, engineers, and installers to achieve their goals in the most

U-kon Systems has developed solutions of attaching cladding materials that are:

- Have extended lifecycle

- Comply with all local construction standards and codes

U-kon systems project support

U-kon Systems offers project support for each of the stages: planning, bidding, and construction.

PLANNING (CONCEPT STAGE):

standard solutions for architectural drafts, optimal attachment solutions for cladding material, preliminary thermal analysis.

BIDDING (PROCUREMENT):

cost calculation, specifications.

CONSTRUCTION (EXECUTION):

shop drawings, structural calculation, on-site training, assembly instructions.

Our industry expertise, market connections, skilled professionals, quality product and efficient logistics system accounts to most optimal delivery times.





ITechnical documentation

U-kon Systems have developed ready-made solutions that cover the most common connections such as openings, parapet, inside and outside corners, foundation, etc. All technical documentation is available for downloads in different formats (AutoCAD, Rivet, BIM). For more details, please contact us

www.u-kon.com



Cost-effective solutions

U-kon Systems offers a large variety of solutions for facade design of any complexity. In the early design stages our engineers can offer suggestions for the most cost-effective solution and give you advice on how to optimize the facade.

Quote checklist

- Our team requires the following package of documents for cost estimation:
- General information about the project (location, specific loads, etc).
- Wall schedules
- Elevations
- Plans Details and sections
- Having this information helps us provide you with the most accurate quote.

LJ-kon°



Preliminary quote

We offer our customers assistance with calculating the cost of the system during the bidding stage.

Our engineer team can provide a preliminary quote within a short period of time with detailed specifications.

All preliminary calculations are based on typical areas of the building and it may slightly vary from the final calculation depending on project details.

The final detailed cost of the system on the entire project will be calculated after signing the contract.

Customer:			Proje	ict:	
Company*			Proje	ct name:*	
Adress:*			Addr	ess:*	
Contact person:*					
Phone: F-Mail·					
Project data					
New buil	iding [Reconstruction,		Facade area [m²]:	*
Project status					
Design st	tage 🔽	Bid stage		to shall after show of	lata.
Building drav	wings av	ailability	Section Plan deta	details ails	ate -
Building drav Elevation Plans Insulation Insulation thickness Type	wings av ns s [mm]*	ailability	Section of Plan deta	details mal conductivity Target R eff	die
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CONSTRUCTION Phase

Selection

Similar and complex facade areas are selected by engineers as a primary design segment. These segments serve as the basis for calculating the cost of the entire facade.

















Structural calculation

Our engineers conduct structural analysis and determine the most efficient system for the given project based on the initial project data provided by the customer, such as:

- Type of backup walls
- Insulation thickness
- Type of cladding and its weight
- Wind loads
- Method of fastening cladding panels

An installation plan is developed based on the calculation. The plan takes into account all the elements of the system, as well as the distances between the fasteners.



The installation plan determines the exact amount of materials required for the selected segment.

This method allows us to make a quick calculation of the entire project through multiplying the amount of selected segment materials by the area of the entire project.



Project Specification System ATS-316

Article	Product name	Units	Quantity per selected area	Quantity for a full project	
AD-033/220	Load-bearing bracket	pc	94	940	
AD-063/250	Load-bearing bracket	pc	21	210	
AD-062/250	Support bracket	рс	61	610	
AD-061/250	Load-bearing bracket	pc	12	120	
AD-6901	Pressure foot	pc	14	140	
AD-053	Washer	pc	40	400	
AD-0511	Washer	pc	376	3760	
AD-023	Sliding element	pc	94	940	
PD-133	Plastic thermal isolator	pc	94	940	
PD-063	Plastic thermal isolator	рс	21	210	
PD-062	Plastic thermal isolator pc 61 6		610		
PD-061	Plastic thermal isolator	рс	12	120	
A-54	Aluminum girt (length 6 rm)	lm	48	480	
A-16.5	Aluminum girt (length 6 rm)	lm	264	2640	
A-17.5	Aluminum girt (length 6 rm)	lm	30	300	
A-24.1	Aluminum girt (length 6 rm)	lm	90	900	
A-24.2	Aluminum girt (length 6 rm)	lm	108	1080	
JT4-3H/5-5.5x19	5-5.5x19 Ejot stainless steel screws to attached girt to wall bracket		2000	20000	

Project Specification System LT-147p





Shop drawings

Shop drawing is the perfect method of increasing speed and preventing mistakes during the installation process

A shop drawing allows prefabrication of system elements off-site and estimation of the necessary quantity. The shop drawings are available upon request and, due to the involved nature, require an additional fee.

Helps to increase installation speed and prevent any mistakes during installation process.

Based of the set of shop drawings is possible to arrange prefabrication some element off site and estimate the final quantity of elements for the project.





	2,415
	2,100
	1,784
	1,469
	1,154
ļ	0,839
	0,524
	0,209
	-0,107
	-0,422
	-0,737
	-1,052
	-1,367

Additional engineering analysis

Complex elements of the facade such as cornices, pylons, eclairs, columns and other architectural elements are calculated separately.

These calculations are carried out using special mathematical models and 3D modeling software.



PRODUCTS



ATS/LT-572 THE CONCEALED METHOD

The panels are glued into the aluminum frame which allows installing large format panels in any wind loads requirements. Special stainless steel clamps can be installed around the perimeter to provide additional insurance.







ATS/LT-414 THE CONCEALED METHOD

Option 1

The special clamps made from aluminum or stainless steel fixing on vertical profiles to fix terracotta panels on the wall.

Option 2

The horizontal profiles attached to vertical girts. Terracotta panels are installed on horizontal profiles, the shelves of which engage with the grooves in the horizontal ends of the panels.

Possible to combine both methods on the same assembly.





ATS/LT-325 THE CONCEALED METHOD

The panels with pre-drilled holes secure with fastening elements with pins.



ATS/LT-102i THE CONCEALED METHOD

The cassettes method with hooks.





ATS/LT-102sz THE CONCEALED METHOD

The cassettes method with horizontal profiles.

The panels are fitted with special system profiles using the groove and tongue (spring and groove) principle, which allows a quick and easy assembly. The stiffening of the edges of the cassette is achieved by using system profiles. This principle allows the use of larger size cassettes.

Prefabricated metal panels with hooks (AD-2703) install to the vertical profiles with special movable fastening elements AD-5901.







ATS/LT-450 THE CONCEALED METHOD

The brick veneers are installed on horizontal profile shelves which engage with grooves in the horizontal end faces of the panels. At the same time, perforated tapes are installed in the seams. Grouting is carried out with special compounds.









ATS/LT-234 THE VISIBLE METHOD The cladding panels are fastening with special clamps.







ATS/LT-316 THE CONCEALED METHOD

The panels with horizontal kerf secure with specially created horizontal profiles.







ATS/LT-228 THE CONCEALED METHOD

Fastening of the stone panel to horizontal profiles is attached using special fasteners (hangers), the cross-section of which engages with it. Hangers are installed on the back of the panel using special facade anchors.

ATS/LT-147p THE VISIBLE METHOD

Using screws or rivets to attach panels. The fasteners install into flanges vertical and horizontal profiles.



U-kon Systems

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www.u-kon.com