AXOR

HARDWARE
FOR WINDOWS AND DOORS

KOMFORT LINE K-3
SMART LINE S+
ABOUT US

From 2006 AXOR INDUSTRY did a long way from the hardware distributor to the position of the independent world-known manufacturer. These days we specialize in production and supply of the hardware for windows and doors.

AXOR INDUSTRY is a team of people who like what they do. A modern full-cycle production factory and three hardware production lines.

- KOMFORT LINE K–3
- SMART LINE S+
- DOOR LINE DL

AXOR INDUSTRY products successfully comes to the countries of the former CIS, the central Asia, Baltic State, Eastern and Central Europe, proving that Ukrainian quality of the production is a worthy argument for competition not only on European, but also on worldwide market.

We treat our competitors with respect although taking that into account we build our business the way that it is positively different in anything that we make: products, service, sales and marketing.

We build long-term partnership with our clients from the foreign countries. This partnership takes into account interests of the both sides and this approach totally corresponds with our values and our vision of business. A focus of our philosophy is on the client requirements rather than on the pricing.

We like what we do and we reach out to create products easy to handle and comfortable to live with.
International company

Modern equipment
Qualified personnel
High quality products and service
ABOUT THE FACTORY

AXOR INDUSTRY is a full-cycle factory #1 in Ukraine and one of the biggest factories of this industry branch in CIS.

The factory is instrumented with the modern hi-tech equipment which allowed us to automate the production process and make it correspond with the European standards.

AXOR INDUSTRY production processes are organized in a way that gives a high level of security both to the personnel and environment. Lean resource consumption forms the basis of the work – for example, smart disposal system and water sanitation.

Our warehouse logistics is based on an address tracking and storage system which helps us to make order consolidation fast and accurate.

We provide quality control at every stage of production starting with evaluation of the raw supply materials’ quality and making the final tests for the ready products. Quality control procedures are conducted by our own certified laboratory as well as by the independent international institutions.
FULL PRODUCTION CYCLE

1. Tools workshop
2. Die-casting
3. Press unit
4. Products warehouse
7. Laboratory
Automation of production processes
Quality’s control on each stage
Environment oriented manufacturing
Certified laboratory
Performance test for the number of the opening cycles
Hinge group test for the sustainability with the extra loads
Tests of the hardware security coating
QUALITY CONTROL

Consistent high quality of the products is a matter of principle for us. To provide for the hardware quality control there is a non-stop round the clock certified and modernly equipped laboratory working at the territory of AXOR INDUSTRY factory. Here we can conduct the full cycle of all the necessary hardware tests according to the DSTU B. V. 2.6 – 39:2008, GOST 3077-2001, GOST 538-2001, EN13126-8: performance test for the number for the opening cycles, hinge group test for the sustainability with the extra loads and resistance to corrosion.

According to tests, AXOR INDUSTRY hardware can provide more than 20,000 tilt and turn and more than 10,000 turn cycles of window opening, which is equal to 15 years of normal usage of window construction. We control the quality of the product using its unique code.

TM AXOR hardware fully satisfies the requirements of DSTU, GOST and European norms, which guarantees to the consumers hardware reliability and functional operability during the use of the ready product.

Protective coating

According to the results of the tests conducted by the independent laboratory the hardware coating by TM AXOR was assigned a 5th grade of corrosion resistance (the top-grade according to EN requirements)*.

*Salt spray test, t =40 degrees, test duration = 480 hours
KOMFORT LINE K-3
KOMFORT LINE K-3


- Komfort Line K-3 – is the standard-class hardware which is designed for the PVC windows and doors of the inward opening.
- Komfort Line K-3 has high operational qualities and is equipped with all required extra options, is reliable and functional staying within the range of the attractive prices of its class.
- A window with K-3 hardware can be equipped with several burglar retardant elements.
- Reinforced hinge group allows using the system with the sash weight up to 130kg.
- Due to the peculiarities of the coating it is perfectly suitable for the use in the regions with high humidity.
Application range

- **Tilt & turn sash**
  - Width: 300–1520 mm
  - Height: 370–2390 mm
- **Turn sash**
  - Width: 280–1280 mm
  - Height: 450–2390 mm
- **Double sash with the main tilt & turn sash**
  - Width: 400–1280 mm
  - Height: 550–2390 mm

Security

- Basic security
- Maximum sash weight: 130 kg

Reliability

- Certified reliability
- Additional functions
- Tight fitting
- High reliability
- Smooth operation
- Silent operation
1. Anti-theft elements
2. Step-by-step opening
3. Stay arm
4. Wrong operation safety device
5. Sash lifter
6. Child security lock

10 YEARS

QUALITY
WARRANTY
## COMFORT AND FUNCTIONALITY

<table>
<thead>
<tr>
<th>Anti-theft elements</th>
<th>Wrong operation safety device</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>1</strong></td>
<td><strong>4</strong></td>
</tr>
<tr>
<td><img src="image1.png" alt="Image" /></td>
<td><img src="image4.png" alt="Image" /></td>
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<tr>
<td>Makes it difficult for the burglars to open the window.</td>
<td>Provides for the comfortable window closing and blocks false opening.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Step-by-step opening</th>
<th>Sash lifter</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>2</strong></td>
<td><strong>5</strong></td>
</tr>
<tr>
<td><img src="image2.png" alt="Image" /></td>
<td><img src="image5.png" alt="Image" /></td>
</tr>
<tr>
<td>Allows opening the window in a desired position to create ventilation with a fixed gap from 12 to 20mm.</td>
<td>Excludes sash drooping in the “closed” mode.</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Stay arm</th>
<th>Child security lock</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>3</strong></td>
<td><strong>6</strong></td>
</tr>
<tr>
<td><img src="image3.png" alt="Image" /></td>
<td><img src="image6.png" alt="Image" /></td>
</tr>
<tr>
<td>Allows for the comfortable closing of the window due to the sash latch mechanism. Include blocking of the false handle turning in tilt mode.</td>
<td>Allows preventing window opening by the little children.</td>
</tr>
</tbody>
</table>
Mounting holes

Mounting holes in the top and bottom hinge bearings are designed in a way that all self-tapping screws would get inside the frame reinforcement.

Wrong operation safety device

Wrong operation safety device is designed in such a way to be locked in a central position before the mounting.

Works for the clearance of 10.5–14 mm. In the case of necessity the frame section can be regulated in height for ±1 cm.

Drive pins

Drive pins provide for the reliable lock up of the bottom hinge before the mounting start (screwing).

Stay arm hinge

Stay arm hinge is cross-functional – for both left-hand and right-hand opening. Hold down adjustment is ±1 mm.

TECHNICAL FEATURES

Lock pins in the hardware housing

Lock pins in the hardware housing that allow fixing all the hardware elements before the self-tapping screws are engaged and thus exclude elements’ shifting during the process.

Bush of the bottom hinge

The bottom hinge has a bush with the position lock pin made of the high endurance polymer. It prevents the adjustment screw from the unscrewing during the opening of the sash.
**KOMFORT LINE K-3**

**Element connections**
A reliable connection of the middle lock and extension lock or middle lock and stay arm with the help of the self-tapping screws – it excludes their disconnection or malfunction.

**Pin of the top hinge bearing**
When connected to the stay arm hinge it creates a very rigid fixture due to a special pin of the high-endurance polymer. This prevents self-disconnection.

**Locking plate**
Locking plates are produced of a special wear-resistant alloy (copper, aluminum, zinc). The wear at 20 thousand opening cycles does not exceed GOST 3077–2012 norms.

**Misco ventilation**
Allows opening the sash for 6 mm to allow room ventilation without significant loss of warmth.

**Mushroom pins**
Safety locking plates in combination with the mushroom pins of the corner transmissions and middle locks allows making a window that responds to basic security requirements.

**Safety locking plates**
Safety locking plates provide for the difficulties for the break in.
Security and comfort in one solution

- SMART LINE S+ is a new hardware solution by AXOR INDUSTRY designed for the PVC windows and doors of the inward opening.
- SMART LINE S+ standard configuration features wrong operation safety device, basic security solutions, microventilation mode and optimal number of the locking elements.
- Hardware features only mushroom pins which allows for several levels of burglar security of the window.
- Engineering solutions of SMART LINE S+ make this hardware reliable in use and easy in fast in mounting.
- Application range includes standard constructions such as turn, tilt, tilt/turn, first tilt and double sash.
- Reinforced hinge group provides for the system use with heavy sash with the weight up to 130kg.

Reliability

- Certified reliability
- High reliability
- Tight fitting
- Complex solutions for the fast and easy mounting
- Smooth operation
- Silent operation
Application range

Tilt & turn sash
- Width: 300–1520 mm
- Height: 450–2390 mm

Turn sash
- Width: 280–1280 mm
- Height: 450–2390 mm

Double sash with the main tilt & turn sash
- Width: 400–1280 mm
- Height: 550–2390 mm

Tilt sash
- Width: 300–2390 mm
- Height: 280–1620 mm

Security

SMART LINE S+ provides a flexible burglar retardant system as it allows for the installation of various numbers of the anti-theft locking plates to fit the security requirements.

The customer can choose the basic security level with two anti-theft elements or the advanced one where all hardware elements are burglar retardant.

Basic security level
- RC1 (WK1)
- RC2 (WK2)
- RC3 (WK3)

Heavy sash, weight up to 130kg
- 130 kg
Micro ventilation

Burglar retardant locking elements

Wrong operation safety device

Basic security level

Step-by-step opening

Advanced security level

Decor overlay

Child security lock

10 YEARS WARRANTY
**Standard configuration**

**Micro ventilation**

**1** Allows opening the sash for 6 mm to allow room ventilation without significant loss of warmth.

**Burglar - resistant locking pins**

**2** Provide for the difficulties in case of the break in which is an important feature for the private houses and for the apartments located at top or ground floors of a building.

**Wrong operation safety device**

**3** Does not allow the handle to be turned while the window is in an opened position which prevents false sash opening and provides for the smooth window operation.

**Basic security level**

**4** Standard configuration already includes two positions with the burglar retardant elements which increases break in properties of the window.

**Additional options**

**Step-by-step opening**

**5** It allows controlling the level of the room ventilation. The range of the step-type opening varies from 12 to 20 mm.

**Advanced security level**

**6** Hardware that features only mushroom pins allows for the significant increase of the security level via simply changing standard locking plates for the safety locking plates.

**Decor overlay**

**7** SMART LINE S+ hardware can be used with a variety of the window lamination options due to the assortment of the decor hinges overlay.

**Child security lock**

**8** Special child security lock that blocks the window and allows only turning it to the ventilation mode.
TECHNICAL FEATURES

Stay arm
Use of the right-sided and left-sided stay arm with the increased to 20 mm integrated sash latch mechanism operating threshold.

Smart corner connection
Simple and reliable connection of the stay arm with the middle lock with the help of the special clamp which also makes mounting more comfortable.

Optimization of the operations’ number
Straight cut excludes the necessity to shift the slider in the corner transmission and reliable element locking is provided with the help of the self-tapping screw.

Bottom hinge.
Bearing pin of the bottom sash hinge (6x22 mm) is made of the high endurance steel and is integrated into the hinge housing which provides for the extra hinge strengths necessary for the use with the heavy sash.

Pin locking
Tilting of the bottom hinge bearing pin for 180° allows preventing the contact of the screwdriver bit lock with the pin bearing during the bottom self-tapping screw mounting.

Step-type angle locking
Step-type locking of pin bearing tilt angle prevents the shift of its position during the mounting process.
Pin of the top hinge bearing

When connected to the stay arm hinge it creates a very rigid fixture due to a special pin of the high-endurance polymer. This prevents self-disconnection.

Lock pins in the hardware housing

Lock pins in the hardware housing that allow fixing all the hardware elements before the self-tapping screws are engaged and thus exclude elements’ shifting during the process.

Bush of the bottom hinge

The bottom hinge has a bush with the position lock pin made of the high endurance polymer. It prevents the adjustment screw from the unscrewing during the opening of the sash.

Regulation of the bottom hinge

An option of regulating the pressure fitting of the bottom sash hinge in the range of ±0.8 mm.

Step-by-step ventilation

An option of installing step-type ventilation for the ready-made window.

Pin of the stay arm

The stay arm can be additionally complemented with the mushroom pin starting from the standard size of 600 mm.
FIRST TILT, MODERN SECURITY SYSTEM
First Tilt safety system for children

**KOMFORT LINE K-3**  **SMART LINE S+**

*First tilt* «initially tilting» - it is some complete set, in which habitual sequence «opening / tilting» was changed, namely during handle’s rotation to horizontal position a window is tilting for airing, and in vertical position a window is opening completely.

That technology was designed especially for rooms, where it’s necessary to provide some safety for children, given that it’s more difficult for children to rotate a handle in the up position. Using special handle with key operated, it’s possible to block down of sash’s opening, leaving only the sash’s tilting on airing available, that provides some additional security for children from accidents.

The windows with First Tilt are recommended to install in children’s rooms facilities, as well as in social and particularized organizations (schools, kindergartens, hospitals, hotels).

Besides main task — providing protection from opening windows by children — First Tilt hardware has advantages such as:

- the sequence of First Tilt openings is more ergonomic. According to statistics, PVC windows are more often set to the tilt position;
- during the exploitation windows with First Tilt system reduces the amount of hardware’s mechanisms’ motions that increases the service life of the hardware and the window itself.

The First Tilt is available in the Komfort Line K-3 and Smart Line S+ systems.
Burglar-resistant

Durability

Protection for children from falling out of the window

Aesthetic appearance
Cover for gear

Advertisement for the PVC windows and doors manufacturer brand
Easy and reliable mounting
Application and dispensing of any information required by the partner company
PRODUCT BRANDING

By choosing the TM AXOR hardware manufacturer of PVC windows and doors obtains an option of branding the ready product by application of their logo on the gear box. Gear box was specially designed for the TM AXOR hardware and is located accurately near the handle which provides for the constant visual contact with the manufacturer’s logo when the window is in open/tilt position.

Advantages of the logo on the cover for gear:

- It adds to the customization of the ready product;
- Provides for making the manufacturer’s brand more popular and serves as a specific guaranty of quality.
- Serves as a long-term and unique advertisement of the manufacturer’s brand.

AXOR INDUSTRY offers two types of branded coatings to manufacturers of PVC windows and doors.

PVC cover:

- produced from the high-quality PVC with the high-grade operational features, deformation, humidity, high and low temperature resistant;
- easily mounted with the hardware, zero accidental dismounting;
- allows a possibility of the cover color choice, application of the full-color logo or contact information.

ZAMAK cover:

- made of the high quality zinc-aluminum alloy;
- is not affected by the external aggressive factors;
- all details and sketches of the product are included to the form initially and the cover is molded with the logo;
- ZAMAK overlay provides for the premium-class logo look which serves to create a reputation of the reliable manufacturer of the high-quality products.
OUT collaboration with PVC windows and doors manufacturers is not limited with hardware sales as we also provide for the full-cycle before– and after-sale maintenance services.

At the beginning of our collaboration the essential actions from our side are represented by the technical audit of the production quarters, 2 day couching of the employees a tour partner’s location, provision of the mounting equipment (drilling jigs, adjusting tools, punching machines), software, full set of the informational-technical materials (catalogs, mounting layouts etc) as well as required first-line technical support.

Technical support

Production and mounting of windows and doors inevitably produce technical questions. Despite the variety of the reasons for their occurrence our technical support service is ready to reply for the request about hardware and ready product mounting in 24 hours after the request was received.

Logistics

AXOR INDUSTRY organized its logistics in a way to be able to process and deliver orders as soon as possible and within the scheduled timeframe. For this reason we have a developed network of the regional warehouses and logistic routes are developed in a way to offer the client the most appropriate way of delivery. We also effectively use express delivery method including delivery in small batches.
Software customization

To obtain a standardized data exchange and increase service quality our experts render assistance in entering all the necessary data about TM AXOR products to the client’s software. This provides for the possibility to decrease administrative expense and time which is necessary for the software customization.

On-line order management service

AXOR INDUSTRY provides for its clients a secure access to the on-line order management service which includes all sales phases. Convenient interface and broad functional options all clients at any given time of the day and night to obtain full information about their orders, product prices, work statistics, sale offers.

Media-center

To enable our clients obtaining up-to-date information we created media-center which is available 24 hours per day at www.axorindustry.com. This electronic service gives access to brochures, technical catalogues, mounting layouts, video materials and presentations.

Marketing support

We developed a complex program of the marketing customer support. Marketing materials are focused on the advantages of the windows with our hardware. We render assistance for conducting advertisement campaigns, sales outlets design, personnel qualification upgrade via coaching seminars and training sessions.
CERTIFICATES

Certificate ift Rosenheim
Certificate ISO 9001:2015
Certificate DSTU

Certificate GOST
Warranty certificate
Brand of the Year 2017