

JACQUARD PATTERNS

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The organiser of the exhibition:

Philippe de Girard Linen Museum in Żyrardów

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Photographs in the brochure come from the collection of the Linen Museum in Żyrardów and from the collection of the Museum of Western Masovia in Żyrardów.

A free copy.

Żyrardów, 2020

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im. Filipa de Girarda w Żyrardowie

'In the weaving mill, a machine gives the rhythm to the looms: bang - bang - bang. Thousands of larger and smaller looms hurry in a breathless momentum, faster and faster. Like lianas in an unspoilt forest flow from the top to the bottom and from the bottom to the top, thousands of stripes convey a noisy, sharp and swift movement to the dashing wheels and gringing gears.' Translated from the book "Mój Żyrardów" by Paweł Hulka-Laskowski

Philippe de Girard Linen Museum in Żyrardów is one of the most interesting attractions of post-industrial tourism in Poland. It presents the cultural heritage of Żyrardów, closely related to the opened in 1833 Linen Factory, which became the most powerful centre of the linen industry in Europe at the end of the 19th century.

The factory in Żyrardów prospered successfully for over 170 years. The introduction of economic reform in 1989 led to the gradual closure of individual branches of the factory and the final collapse of the plants in 1999.

The seat of the Linen Museum is the building of the former printing house (one of the factory's departments), which is now the part of the 19th-century factory settlement in Żyrardów, which is considered a historical monument. It is a living museum filled with the industrial atmosphere, the smell of a former factory and the sound of machines, which capture the spirit of history and allow to experience new impressions.

In 2020, the latest exhibition 'Jacquard patterns' was opened. It presents the machines and devices used in the technological process of the production of jacquard fabrics in the factory in Żyrardów.



UNIQUE JACQUARD DESIGN

The main exhibit presented at the exhibition is the machinery park consisting of 16 Saurer shuttle looms, produced in the 1970s, which are commonly known as jacquard looms. This is the only loom of this type in the world, equipped with mechanically controlled jacquard machines with a Verdola attachment, on which, using pattern cards, not electronically controlled machines, like on commonly used jacquard loom, the fabric pattern is introduced.

The uniqueness of jacquards is based primarily on the use of an appropriate mechanism during their production, invented in 1805 by Joseph Marie Jacquard. It allows to control single warp threads. Mass production of jacquards, which started in 1815, revolutionized weaving all over the world. Weaving workshops based on Jacquard's mechanism were also used in the Linen Factory in Żyrardów.

The exhibition is also enriched by the devices used in the preparation department of the weaving mill (a sectional warping mill, drum winding machine, weft winder) and at the finishing stage (a shearing machine, cloth-looking frame or a roller), which were produced in the 60-80s of the 20th century.



PATTERN PROGRAMMING

The jacquard machine is the first ever attempt to automate production through the use of program control recorded on perforated cards (pattern cards). The transfer of the jacquard pattern to the fabric took place in the process of reading the pattern punched on the card in the form of holes by the jacquard machine. A simple zero-one system allowed to control single warp threads, lifted by the cords.

Perforated cards were also used in other areas of textile industry, as well as in other industries and in the cultural sector. Over time, they were recognized as the first storage media that served as the memory of the first computers invented in the 20th century.





THE BEGINNINGS OF THE JACQUARD FABRICS

The first jacquard looms appeared in the linen factory in Żyrardów at the turn of the 1840s and 1850s. Along with the development of the factory, the machinery park was modernized and new looms were purchased. With time, a separate weaving mill (the so-called old jacquard weaving mill) was built. There were over 350 iron shuttle looms with manual replacement of bobbins. However, in the mid-1970s, a new weaving mill was erected, with more modern plain and jacquard looms.

The Linen Factory offered a large assortment of linen and linen-cotton jacquard products. Orders were implemented for, among others for LOT airlines or PKP, and on the two largest jacquard looms, the so-called Orly, government orders were produced (mainly tablecloths with the Polish emblem). Most of the jacquard products were exported to foreign markets (even to 34 countries).

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NEW LIFE OF THE JACQUARD

After the Linen Factory was closed in April 1999, the traditions related to jacquard were taken over by a private company 'Lniane Tkaniny Żakardowe' which operated till 2019. After its closure, all machines were bought by the town of Żyrardów and in 2020, transferred to the Linen Museum for exhibition purposes.

Restarting jacquard looms for demonstration purposes, as well as specially designed new fabric patterns, allow to continue the over 170-year tradition of creating products at weaving workshops with machines based on the invention of Joseph Marie Jacquard.



The order of visiting the exhibitions at the Linen Museum in Żyrardów:

- 1. Żyrardów the linen town
- 2. Spun into thread
- 3. Jacquard patterns
- 4. A thread linking the past with the present
- 5. The finished fabrics
- 6. Silkscreen & Textile





Visiting the exhibition

Monday closed

Tuesday – Friday 10:00 – 15:00

Saturday – Sunday **11:00 – 18:00** (open at weekends only from April to the end of October)

Guided tours require prior telephone contact

Muzeum Lniarstwa im. Filipa de Girarda w Żyrardowie ul. Dittricha 18, 96-300 Żyrardów

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