

5.134 letters (excl. spaces)  
6 press photos  
23,1 MB

## Frankfurt Airport Terminal 3: New Manto G3 wall formwork generation gets apron towers into shape

**Ratingen/Frankfurt am Main, July 2021** The structural work on Pier H at Frankfurt Airport is set to be completed in a few weeks. The apron tower at the beginning of the pier is clearly visible rising upwards – with the help of a climbing scaffold from Hünnebeck and the new Manto G3 wall formwork generation.

Anton Schick GmbH + Co KG from Bad Kissingen is building two new passenger piers at Frankfurt Airport – Pier H and Pier J. Pier H is a 400 m long pier with four floors, and an almost 70 m high apron tower is being built at the base of the pier. The Schick site manager in charge manages the structural work of the highly technically demanding large construction site and provides an explanation of the unusual construction process: „We are not building continuously from the bottom to the top, as is usually the case. Instead, we are constructing seven individual partial structures close together, which will later be connected to each other.“ The first four floors of the 20 m x 8 m apron control tower are integrated into the pier, while the remaining eleven floors are raised to height using Hünnebeck climbing formwork (CS 240L). Levels 13 and 14 are designed as a staggered storey that forms the tower canopy projecting 6 m towards the north.

### Logistical challenge

The enormous length of the pier alone requires the use and coordination of extremely large quantities of material. This is a major logistical challenge because the cast-in-place concrete components, which are mainly massive, are often combined with prefabricated parts. This calls for robust and flexible formwork systems that can be relied on – day in, day out. Since April last year, a whole range of Hünnebeck products have been in use: including the Topec modular formwork, the modern Topmax steel-frame slab table, the Modex modular scaffolding system, the CS 240L climbing formwork, the 80 kN/m<sup>2</sup> Manto wall formwork and its new generation, Manto G3 and G3 M.

The construction site team was particularly curious about the latter because the further development of the established system for large wall areas is designed for high levels of efficiency and offers various innovations:

- Freely selectable anchoring technique, which also allows one-sided anchoring.
- Ecoply all-plastic formwork lining for high-quality concrete surfaces.
- Optimised panels with flexible connection options for accessories.
- Special G3 M version with indented anchor points.

Climbing formwork for the tower

The Manto G3 or G3 M is currently being used for the construction of the tower, which is being built under high safety requirements (wind load, ongoing flight operations) with the

aid of a crane-dependent climbing mobile scaffold (CS 240 L). The modular climbing mobile scaffold serves as a support scaffold to support the wall formwork and is also used as a working and safety scaffold for all reinforcement, concrete and finishing work. It combines all the necessary working platforms and the Manto G3 wall formwork into a complete unit that can be moved by crane. The climbing principle: The formwork is moved away from the concreted wall by means of a special release device and then lifted – together with the platform – by the crane to the next level in one operation.

Platforms from the Platinum range with internal ladders are mounted on the outside of the tower formwork, while concreting platforms from the Manto range are suspended on the inside. A stair tower from the Modex modular scaffolding range, located on the inside of the core, provides safe access to the wall formwork, and side protection nets shield the work from the outside.

### **Safety first**

In the run-up to the project, Schick's work preparation department, in cooperation with Hünnebeck, developed a sophisticated assembly, dismantling and safety concept, which describes in detail all the steps of the construction process for the tower production. The work becomes particularly demanding from level 13 onwards as this is where the overhanging pulpit areas begin. The solution: A working platform is erected below the pulpit from special suspension points with the aid of „hanging“ support frames. To this end, the climbing formwork has to climb back and make way for the assembly of pre-assembled temporary CS 240 L auxiliary platforms, which are securely connected to the support frames. The overhanging slab areas are constructed using the modern Topmax steel-frame slab table and the manually operated Topec modular formwork. They are both also used in the standard floors. However, a special solution was developed here for slab areas up to 80 cm thick: Here, the Topmax tables are doubled up with another formwork lining and provided with additional supports.

### **Initial conclusion**

Around 80 percent of the tower is now standing. The site manager in charge takes stock of the situation: „Nothing can be left to chance on this site. We need to be able to completely rely on the performance of the formwork solutions used. This has been very successful so far. We have a very reliable partner at our side in Hünnebeck – especially for the highly demanding tower construction.“

Schick decided to include the Manto G3, or G3M, system in its formwork inventory as soon as it was launched on the market. Not least because the company had already been impressed in the past by the advantages of single-sided anchored formwork in the form of its „big wall formwork brother“ Platinum 100, which it now uses on its construction sites with an area of around 2,500 m<sup>2</sup>.

When asked about the new Manto generation, the site manager referred to comments made by his site team. „As well as the efficient anchoring and high-quality plastic formwork lining, the formwork setters very quickly noticed other improvements. Among other things, the increased stability thanks to the new vertical profiles on the frame, which also offer even more connection options, for example for aligning struts and platforms. This makes work easier, saves time and costs. We also use the M panels with the indented anchor points in some areas here. This allows us to achieve the desired symmetrical anchor and joint pattern without any additional effort – very efficient.”

#### About Hünnebeck

The BrandSafway Group, headquartered in Kennesaw, GA, USA, is a leading global provider of a broad range of products and services for access solutions, specialized industrial services and formwork and support solutions for industrial, commercial and infrastructure applications. BrandSafway facilitates conversion and modernization measures as well as expansion and new construction programs using defined processes and with safety as its uppermost priority. As part of its global presence, BrandSafway serves more than 32,000 customers worldwide through a closely knit network of more than 38,000 employees at 350 locations in 30 countries.

The BrandSafway Group comprises a number of strong traditional brands that are among the market leaders in their respective segments and regions. Hünnebeck, headquartered in Europe, is part of this international group of companies – a name that dates back to 1929 and stands for formwork, scaffolding and safety equipment characterized by high quality, flexibility and cost-effectiveness. Hünnebeck also offers a broad spectrum of project-related services, ranging from engineering, site logistics, cleaning & repair services, user training and formwork services to complete project development. The BrandSafway formwork division also includes SGB (Middle East/Asia) and Aluma Systems (North and Latin America).

Further information about Hünnebeck is available at [www.huennebeck.com](http://www.huennebeck.com)

**Contact:** Press department Hünnebeck GmbH, Babette Haas,  
Tel. +49 2102/937-220, Fax +49 2102/37551, e-mail: [bhaas@huennebeck.com](mailto:bhaas@huennebeck.com)

## PHOTO PRESS INFORMATION

Frankfurt Airport Terminal 3: New Manto G3 wall formwork generation gets apron towers into shape



Motif 029020210406

Under high safety requirements (wind load, ongoing flight operations), the new apron tower is being built with the help of a crane-dependent CS 240 L climbing mobile scaffold.

(Photo: Hünnebeck)



## PHOTO PRESS INFORMATION

Frankfurt Airport Terminal 3: New Manto G3 wall formwork generation gets apron towers into shape



Motif 20200910 141053

A project with high security requirements: The 400 m long Pier H at Frankfurt Airport.

(Photo: A. Schick GmbH + Co. KG)

## PHOTO PRESS INFORMATION

Frankfurt Airport Terminal 3: New Manto G3 wall formwork generation gets apron towers into shape



Motif 20210414 073819

The overhanging pulpit areas start from level 13. For this purpose, a working platform was erected below the pulpit at special suspension points with the aid of „hanging“ support frames.

(Photo: A. Schick GmbH + Co. KG)



## PHOTO PRESS INFORMATION

Frankfurt Airport Terminal 3: New Manto G3 wall formwork generation gets apron towers into shape



Motif 20200908 104552

The modular climbing mobile scaffold serves as a support scaffold to support the Manto G3 wall formwork and is also used as a working and safety scaffold for all reinforcement, concrete and finishing work.

(Photo: A. Schick GmbH + Co. KG)

## PHOTO PRESS INFORMATION

Frankfurt Airport Terminal 3: New Manto G3 wall formwork generation gets apron towers into shape



Motif 20200908 100920.jpg

The new vertical ledgers on the Manto G3 panels increase stability, provide circumferential connection options for the transport hook and serve as a quick connection for alignment struts.

(Photo: A. Schick GmbH + Co. KG)



## PHOTO PRESS INFORMATION

Frankfurt Airport Terminal 3: New Manto G3 wall formwork generation gets apron towers into shape



Motif 01992021406

The new Manto G3 wall formwork generation is equipped with an 18 mm thick durable Ecoply plastic formwork lining and offers freely selectable anchoring technology (one or two-sided) as well as a wedge alignment lock for easy panel connections. Steel-sheathed anchor openings prevent damage to the formwork lining caused by the anchor rods.

(Photo: Hünnebeck)