

DEEP DIVE INTO AVIATION

# → ELEVATING ECAC STANDARD 3 AT MUNICH AIRPORT



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A seamless transition from legacy HBS to the latest ECAC Standard 3 approved scanners.

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## SUMMARY

With the deadline for introducing ECAC Standard 3 approved explosives detection systems fast approaching, all the hold baggage scanners (HBS) at Munich Airport needed upgrading to comply with the new regulations. This involved re-designing part of the baggage handling system (BHS) layout and elevating several of the new scanners on to platforms and a mezzanine floor in order to maximise the available space. As the chosen security partner, Smiths Detection worked with the authorities and engineers to ensure a seamless transition with minimal disruption to the on-going screening process in this busy airport.

## THE CHALLENGE: REPLACING THE ENTIRE HBS FLEET

Munich is the second largest airport in Germany, annually handling over 46 million passengers travelling on 100 airlines to over 250 destinations in 70 countries. Although regulation changes meant all 34 existing Smiths Detection hold baggage scanners in Terminals 1 and 2 had to be replaced with ECAC Standard 3 approved equipment, it was critical to maintain 'business as usual' on the BHS.

Space constraints and a new layout for the BHS in Terminal 1 meant the addition of four new platforms for the transfer baggage security scanners—one each in T1 Modules A-D was required. Elevation is an effective space saving solution and, around the world, over 30% of BHS are on platforms or mezzanine levels. It is important however, to take the associated static and dynamic forces into consideration at the planning and

design stage—when correctly installed, vibration from elevated rotating gantries is virtually imperceptible.

Terminal 2 presents a slightly different challenge as some scanners are to be installed on a steel mezzanine level along with the baggage handling tote system – the moving totes add to the complexity of the elevation.

### 3 KEY CHALLENGES TO SOLVE



Minimize  
disruption to  
operations



Space  
constraints



ECAC Standard 3  
compliance  
deadline

## THE SOLUTION: A COLLABORATIVE APPROACH

The latest ECAC Standard 3.1 approved HI-SCAN 10080 XCT rotating gantry CT scanners from Smiths Detection were selected to replace the previous, non-compliant systems. Smiths Detection worked with the District Government of Upper Bavaria; the security team at the airport; and third-party specialist design engineers, suisseplan Ingenieure AG Logistik - providing technical data and help with simulations and on-site measurements right from the planning and design stage of the project.

## THE RESULTS: CAPACITY, EFFICIENCY & COMPLIANCE

The nine machines already installed are in daily operation, inspecting check-in and transfer luggage in Terminal 1. Due to precise scanning, the overall alarm rate has decreased.

By changing to a centralised screening concept, only 25 Standard 3 approved systems were necessary to replace the 34 legacy scanners. Overall, this saves space and costs and yet delivers greater efficiency and levels of security. It does, of course, also ensure Munich Airport is fully compliant with the new regulations.

Smiths Detection is once again collaborating with all the various partners to ensure further, equally successful outcomes in both Terminals 1 and 2.



**25** Standard 3 approved HI-SCAN 10080 XCT scanners to be deployed at Munich Airport by 2021, with multiple units installed on elevated platforms



“Having technical input from Smiths Detection from the outset was extremely helpful,” explained Jens Quadt, director of the suisseplan Ingenieure AG Logistik Munich office. “Its engineers have extensive knowledge in deploying heavy scanning equipment in many different settings and were able to offer invaluable support at both the design and implementation stages.”

For the elevated locations, the appropriate load bearing capacities were established to ensure the equipment was correctly positioned with all feet fully supported by structural beams – and never on grids or checker plates. Smiths Detection’s mechanical engineering team used its wealth of experience in this area, having been involved in installing many different types of system on raised sites to create operationally effective, space saving, screening solutions.

Overall, 25 HI-SCAN 10080 XCT scanners will be deployed at Munich Airport by 2021. They combine high resolution X-ray technology, rotating gantry computed tomography (CT) and advanced detection algorithms to deliver exceptional levels of security whilst also increasing operational efficiency.

### KEY BENEFITS OF HI-SCAN 10080 XCT SYSTEMS



Reduced footprint from 34 to 25 systems



Reduced false alarm rate of detection



Enhanced probability of detection