Steel Apron Drive

ThyssenKrupp Airport Systems

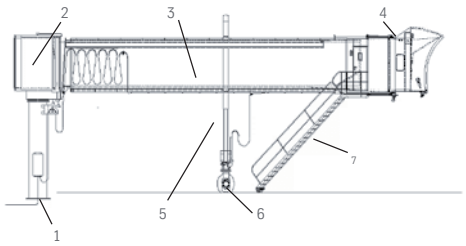
ThyssenKrupp Airport Systems (TKAS) offers complete, flexible global gate solutions. By providing project-tailored passenger boarding bridges (PBBs), the most diverse and demanding client requirements can be fulfilled.

TKAS production lines are equipped with the latest in resources and machinery which have been especially and exclusively developed for the manufacture of PBBs.

The overall concept is based on employing top quality materials and procedures to guarantee the highest standard of finishing. The corrosion protection system applied has been specially developed to improve reliability and extend service life far beyond the average.

SYSTEM COMPONENTS

The TKAS Steel Apron Drive PBB includes the following main components:



1. Support column
2. Rotunda
3. Tunnels
4. Cabin
5. Elevation system
6. Drive system
7. Service stairs

CHARACTERISTICS

The Steel Apron Drive PBB (AD) tunnel walls, which are a core piece of the product, are made of hot-dip galvanized sheets. Panels are welded via an automated spot system to guarantee high precision components, which assure longer lifetime, less repair and maintenance and reduced life-cycle costs.

The hydraulic elevation system provides extremely smooth adjustment operation while also reducing operating costs to a minimum.

Automatic systems, such as Point & Go and pre-positioning, help to automate PBB handling, hence reducing the possibility of human error.

The PBB is available in two- or three-tunnel versions.

GENERAL TECHNICAL DATA

Passenger boarding bridge nomenclature description:
Model TB XY/ZK-N
TB: Apron drive steel
XY: approx. extended length (in m)
ZK: approx. retracted length (in m)
N: number of tunnels (2 or 3)
1 m = approx. 3.28 ft

Commercial denomination only, not to be used for layout purposes as real length varies slightly. Please contact us for exact data.

Two-tunnel steel
MODEL

TB 15/11.0-2	TB 17/12.0-2	TB 19/13.0-2	TB 21/14.0-2
TB 23/15.0-2	TB 25/16.0-2	TB 27/17.0-2	TB 29/18.0-2
TB 31/19.0-2	TB 33/20.0-2	TB 35/21.0-2	TB 37/22.5-2
TB 39/23.5-2	TB 41/24.5-2	TB 43/25.5-2	TB 45/26.5-2

Three-tunnel steel
MODEL

TB 23/13.5-3	TB 25/14.5-3	TB 27/15.0-3	TB 29/15.5-3
TB 31/16.5-3	TB 33/17.0-3	TB 35/17.5-3	TB 37/18.5-3
TB 39/19.0-3	TB 41/19.5-3	TB 43/20.5-3	TB 45/21.0-3

PARAMETERS

Dimensional Characteristics:

	meters	inches
Rotunda		
Internal diameter	2.44 m	96.00"
Free width at the neck of the rotunda	1.51 m	59.38"
Free height at the neck of the rotunda	2.30 m	91.44"
Internal tunnel (tunnel A)		
Free width	1.49 m	58.25"
Free height	2.10 m	83.00"
External tunnel (tunnel B)		
Free width	2.03 m	67.00"
Free height	2.67 m	92.50"
External tunnel (Tunnel C in 3-part PBB)		
Free width	2.03 m	77.00"
Free height	2.67 m	102.38"
Cabin ring		
Internal diameter	3.00 m	123.50"
Service door		
Width	0.70 m	36.00"
Height	2.00 m	80.00"
Front door of cabin in 2-part PBB		
Free width	1.54 m	67.00"
Free height	2.34 m	93.00"
Front door of cabin in 3-part PBB		
Free width	1.54 m	67.00"
Free height	2.68 m	93.00"
Canopy		
Free width	3.20 m	135.38"
Free height	3.02 m	125.69"
Service stairs		
Free width	750 mm	34.81"

USEFUL LOAD & DESIGN LOADS

	EN Standard	USA
Live load	pmax = 300 kg/m²	40 Lb/Ft²
Wind load:		
· In service	pmax = 100 km/h	60 mph
· Non-operational (in parking position)	pmax = 150 km/h	90 mph

ELECTRICAL CHARACTERISTICS

Main power supply (mains 400V/50Hz): 63 A

Start-up intensity (short time): 95 A

Three-phase power supply voltage:
400 V ± 10% (3 phases, neutral and ground)

Power supply frequency:
50 Hz ± 5%
This data applies to a PBB with no supplementary elements (400 Hz, AACC, PCA, etc). Export models are designed to accommodate local power characteristics.

(USA only)
Main power amperage: 60 A
Three-phase power supply voltage:
480 V ± 10% (3 phases, neutral and ground)

Power supply frequency:
60 Hz ± 5%
This data applies to a PBB with no supplementary elements (400 Hz, PWC, PCA, etc). Export models are designed to accommodate local power characteristics.

STANDARDS & REGULATIONS (as applicable)

EU: European Directives (2006/24/ EC Machinery, 2006/95/ EC Low Voltage, 2004/108/EC Electromagnetic Compatibility) and Harmonized Standards (EN 1915-1, EN 1915-2, EN 12312-4, EN 60204-1, EN 61000-6-4, EN 61000-6-2, EN 61000-3-11 and EN 61000-3-12)

The International (ISO, IEC) standard and NFPA upon request and specification.

CHINA: EU Standards & Regulations, GB standard (Chinese National Standard) and MH/T6028 (China aviation industry standard)

USA: USA/CSA codes AISC, AWS, ASTM, SAE, NEMA, NEC, UL, ULc and NFPA upon request and specification.

CERTIFICATES (as applicable)

UNE EN ISO 9001:2008 Quality Management System, UNE EN ISO 14001:2004 Environmental Management System, OHSAS 18001:2007 Health & Safety Management System, EN ISO 3834-2 and DIN 18800-7 (Class E) Welding Process, third party certificate by TÜV, NFPA certificates*

* For detailed information, please contact our Sales offices.

OPERATING RANGE

The Apron Drive PBB can handle the full range of aircraft categories C to F (which includes the A380).

The ergonomic design of the operator control panel ensures the easiest possible PBB operation.

Architectural requirements to be selected by each individual client according to their needs and demands.