

**KSTRONG**<sup>®</sup>  
UNRIVALED SAFETY.

**KS GROUP**

**CASE STUDY**

**SINGAPORE CHANGI AIRPORT TERMINAL 2**



**ROOFING LIFELINE FOR MAIN BUILDING**

**IMPAXX FIXED LINE SYSTEM  
FOR ROOF APPLICATION**

## PROJECT CASE STUDY

SCAN TO VIEW  
PRODUCT

**Client** : Singapore Changi Airport Terminal 2  
**Project name** : Roofing Lifeline for Main Building  
**Product used** : IMPAXX Fixed Line System for Roof Application



### Background

Singapore Changi Airport is a major international airport that serves Singapore, and is one of the world's largest and busiest transportation hubs in Asia. Closed for upgrading works since May 2020, Changi's Terminal 2 has been reopening progressively from May 2022, as the airport prepares to meet the expected increase in passenger traffic. Changi Airport places utmost importance on Occupational Safety to assure the well-being of their employees and contractors. Working At Heights is one of the highest-risk activities for workers thus Changi Airport strives to mitigate any risks regarding activity when working on roofs. Hence the need for a lifeline system to provide work restraint as well as fall arrest protection for workers performing roof maintenance and cleaning works especially the gutter along the unprotected roof edge.

### Requirement

The roof profile used was a Klip-Lok system to avoid the necessity of any holes being made on the roofs metal sheets so as to prevent any water leakage as well as avoiding affecting the roof warranty, a specific requirement of Changi Airport Terminal 2. The main building required a roof safety lifeline system especially designed to follow the edge of the roof's layout. A safety lifeline was also required due to the slippery nature of the roof due to the overgrowth of algae which makes frequent cleaning of the roof a necessity.



## KStrong Solution

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KStrong offered the IMPAXX Series horizontal lifeline which provides a permanent anchorage to a user who has to constantly move along an elevated horizontal track. It comprises of 8mm 7x19 stainless steel wire rope grade 316 running all along the horizontal track, installed on the shock absorbing eye of the Impact post. The Intermediate brackets hold the wire in position all along the length and are installed at intervals. This allows the worker to move smoothly without interruption along the entire length of the lifeline and also through the intermediate brackets, thus ensuring 100% anchorage of the user at all times.

The lifeline also has a Shock Absorber at one end which reduces the impact of fall on the user as well as on the roof sheets. Additionally, the intermediate posts provide additional shock absorption elements to absorb the fall arrest forces and protect the roof sheets from damage. The AFF4000 IMPAXX lifeline series conforms to EN795:2012 Type C and TS 16415:2013 and can be used by up to four users simultaneously. KStrong was chosen because of our competitive advantages in terms of product design, quality, value and local support.

## About KStrong

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The founders of KStrong have been successfully manufacturing personal protective equipment globally for over 20 years. With the support of a large team of highly experienced research and product development specialists along with global manufacturing facilities, KStrong is poised to become the preeminent brand of choice for personal protective safety products. KStrong takes pride in taking careful measures to ensure all products meet applicable respective government codes and professional standards, such as EN, AS/NZS and ANSI. We look forward to helping your company protect its most valued possession, its workers!





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