

**For all traffic routes in the world.
The Tugela escalator.**



ThyssenKrupp Elevator (ES/PBB)



ThyssenKrupp

Cities never sleep.
The constant flow of people
coming and going never ends.
And to keep things moving
there is the Tugela escalator.
Because the Tugela is at
home wherever there's need

for public service round the
clock and in all weather
conditions.

WELCOME FUTURE

**Wherever traffic moves day and night,
there moves a Tugela.**

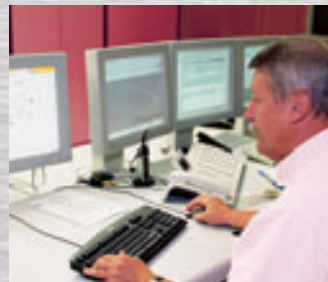


As far as we're concerned the future can begin today.

Outstanding availability

Tugela public service escalators not only make light work of heavy weather, but also of time. The technology of tomorrow can be relied on 24 hours a day, 7 days a week.

Materials of the highest quality and precision finishing guarantee high availability under extreme and continuous operation, essential for underground and overground railway stations, pedestrian bridges or tunnel systems.



tugela

The public service escalator at home all over the world.

Superior safety

Numerous safety sensors continually monitor the Tugela. Its e-escalator technology collects, analyses and archives all operating data acquired by these – a lasting contribution to safety and economy.

Excellent convenience

As comfortable as the Tugela is for its passengers, as simple it is to monitor. Its e-escalator technology enables online management from any control centre. Another advantage in terms of ergonomics is the optional remote control, which allows access to all important functions.

1. The patented flap system on the hand-rail inlet guide offers optimal protection.

2. The automatic restart system uses photoelectric relays to examine the step band after a stop and automatically switches back to stand-by when everything is in order.

3. The acoustic comb segment monitoring records and reports the condition of the comb segments to the control centre.



e-escalator
ThyssenKrupp is
inventor of the
Internet Escalator.

Design that shines even in bad weather.



- 1. Prefer red? Choose between five hand-rail colours.
- 2. Front skirt available in synthetic material or elegant stainless steel.
- 3. Skirt brushes raise safety by keeping a distance between user and skirt.
- 4. Balustrade made from safety glass – from ultraclear to bronze – or stainless steel.
- 5. The step gap lighting illuminates the entrance area.
- 6. Differently structured floor plates made from stainless steel or aluminium. For every location and weather condition.
- 7. Steps available in black or silver, with or without demarcation lines.
- 8. Up or down? A quick glance at the signal is all you need.



Soffit lighting creates atmosphere.

Whether rain, snow or blistering heat, you can count on the Tugela's endless stamina and good looks. A wide range of design options leaves nothing to be desired, so you can order exactly the public service escalator to match your requirements.

Arctic or Gobi Desert?

Doesn't matter! As far as the location is concerned, the Tugela is a real globetrotter.

Countless outer cladding variants and design options make sure that it can be adapted optimally to every environment and all weather conditions.

Glass or metal balustrade?

Tastes differ. So why should the Tugela not take this into consideration? Diverse components and materials can be combined for a result satisfying

your safety and comfort requirements.

Bright and safe

Attractive, and at the same time safe. Lighting systems for step gap, comb plates, skirt band and balustrade give you the opportunity not only to set accents, but provide a safe foothold for users too.



Conceived for eternity. And a few days more.

The Tugela is a genuinely economical escalator. Both its energy consumption and component wear are exemplary low. For you this translates into lower costs and high availability. Here are some good reasons why:

Eco-chain

Lifelong lubrication reduces operating costs and guarantees low-friction running. With no lubrication necessary it also protects the environment.

ETA-drive

Combining bevel and spur gears to maximise economy.

Energy saving systems

Depending on passenger volumes a wide range of integrated energy saving systems is available.

Star drive

The two stage system with constant speed starts and idles in economical star mode and switches to delta mode under load.

Stop and go

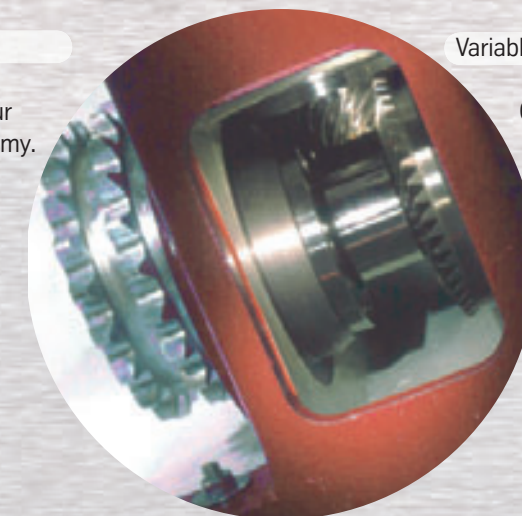
The Tugela stops when no load is present. When the light barrier is triggered it starts before the passenger sets foot on the step.

Two-speed

The reversible pole motor works with two fixed speeds – idling speed at no load and nominal speed at full load.

Variable speed

On higher loads the frequency converter accelerates gently from idling to nominal speed.



Energy saving systems

Star drive

30 %

Stop and go

100 %

Two-speed

50 %

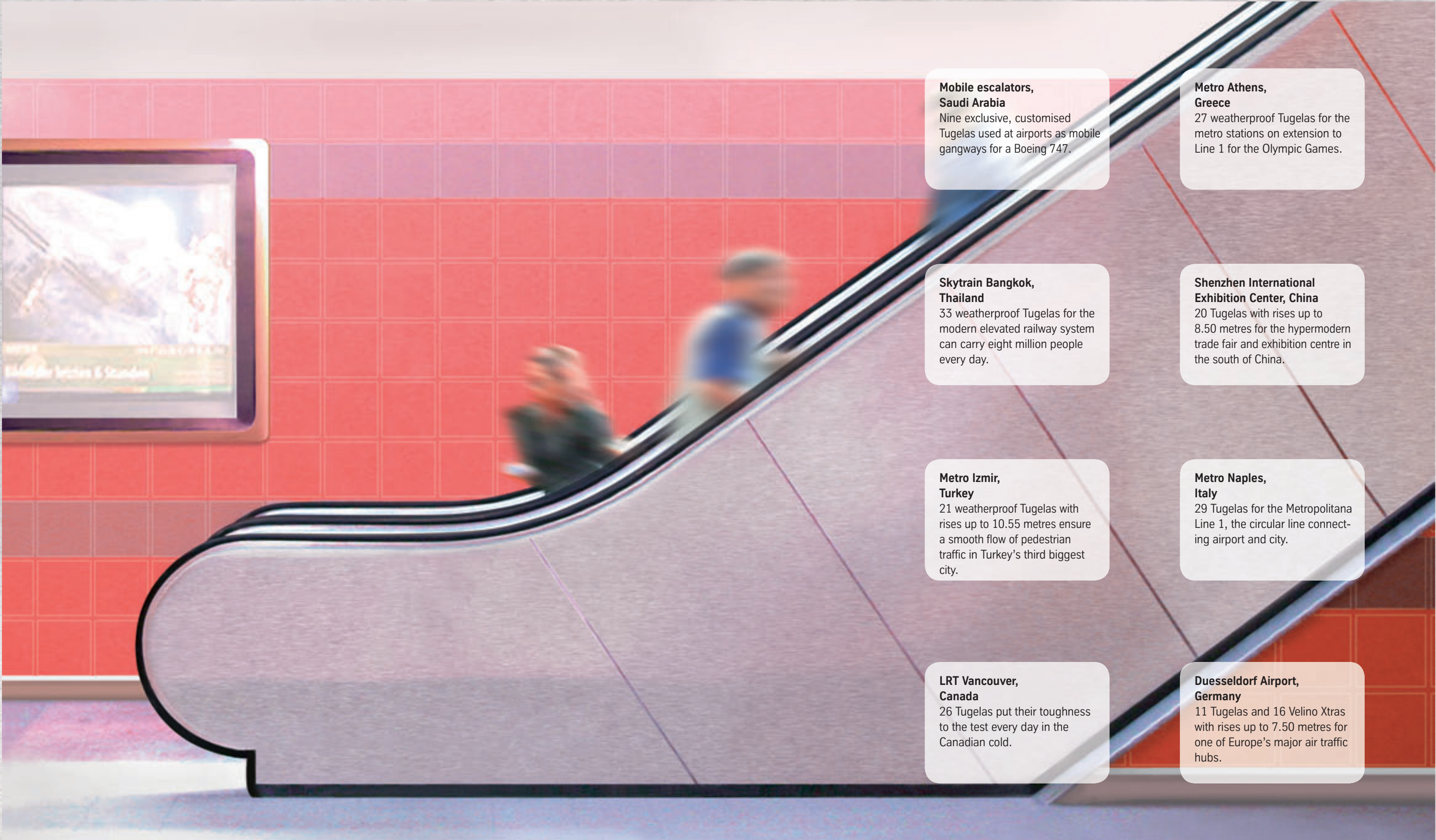
Variable speed

60 %

● ● ● ● max. energy saving potential (dependent on passenger volume)



The Tugela runs around the clock.
And around the globe.



**Mobile escalators,
Saudi Arabia**

Nine exclusive, customised
Tugelas used at airports as mobile
gangways for a Boeing 747.

**Metro Athens,
Greece**

27 weatherproof Tugelas for the
metro stations on extension to
Line 1 for the Olympic Games.

**Skytrain Bangkok,
Thailand**

33 weatherproof Tugelas for the
modern elevated railway system
can carry eight million people
every day.

**Shenzhen International
Exhibition Center, China**

20 Tugelas with rises up to
8.50 metres for the hypermodern
trade fair and exhibition centre in
the south of China.

**Metro Izmir,
Turkey**

21 weatherproof Tugelas with
rises up to 10.55 metres ensure
a smooth flow of pedestrian
traffic in Turkey's third biggest
city.

**Metro Naples,
Italy**

29 Tugelas for the Metropolitana
Line 1, the circular line connect-
ing airport and city.

**LRT Vancouver,
Canada**

26 Tugelas put their toughness
to the test every day in the
Canadian cold.

**Duesseldorf Airport,
Germany**

11 Tugelas and 16 Velino Xtras
with rises up to 7.50 metres for
one of Europe's major air traffic
hubs.

Ten good reasons for escalators and moving walkways from ThyssenKrupp.

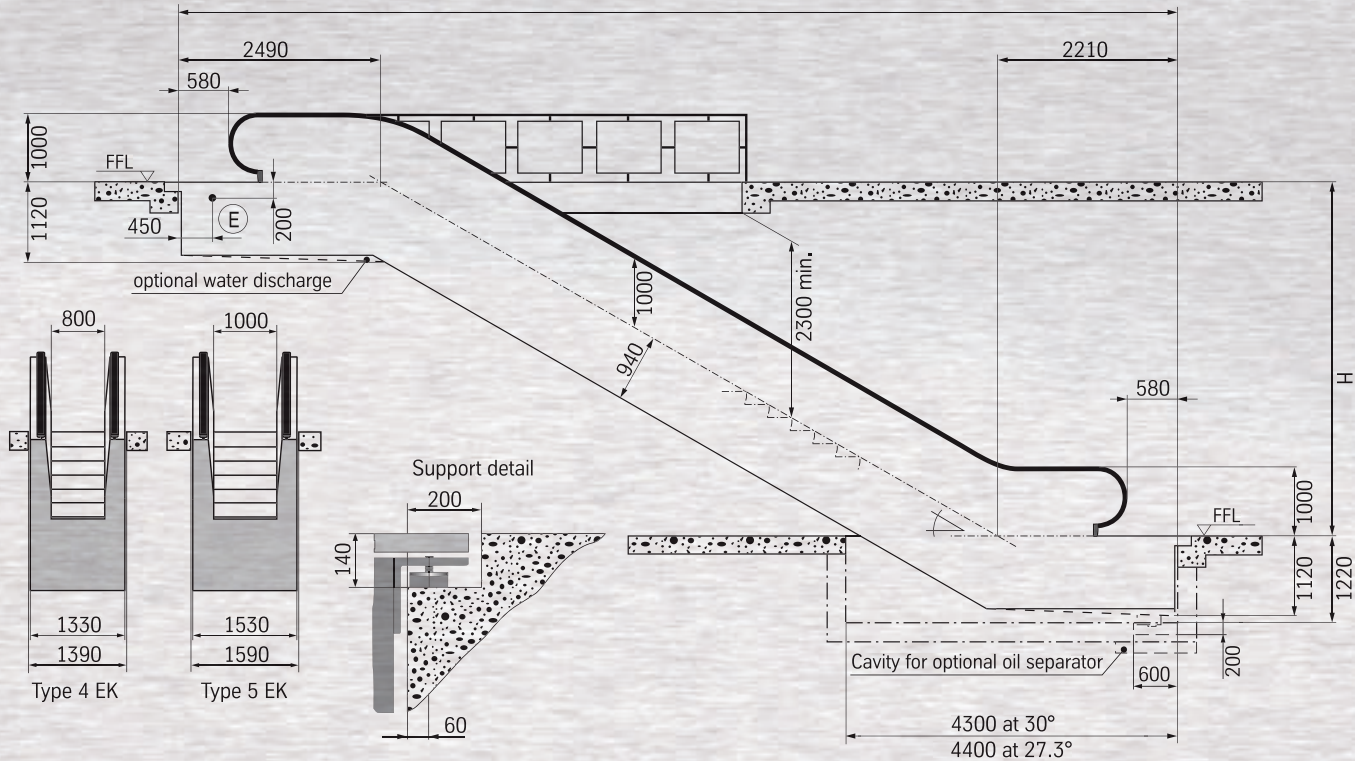


- 1. Speed monitoring
- 2. Controller
- 3. Newel
- 4. Step
- 5. Balustrade
- 6. Skirt band lighting
- 7. Skirt
- 8. Handrail
- 9. Comb plate
- 10. Operating controls
- 11. Protection cover to reversing station
- 12. Tensioning station
- 13. Handrail inlet guide
- 14. Step run guard
- 15. Tracks
- 16. Supporting structure
- 17. Step chain
- 18. Handrail drive
- 19. Drive unit

Tugela

Nominal step width (mm)	4 EK=800		5 EK=1000	
Continuous balustrade height (mm)	1000	1000	1000	1000
Angle of inclination	27.3°	30°	27.3°	30°
Max. rise H (m)	22	22	22	22
Theor. capacity in pers./h				
v = velocity				
v = 0.5 m/s	6750		9000	
v = 0.65 m/s	8775		11700	

$$L = \frac{H}{\tan \alpha} + UT + OT$$



Economy

Large flows of people are efficiently guided through your building. Innovative **energy saving systems** and **long life-cycle** reduce operating costs even further.

Quality

High product quality through innovative technologies, precision **finishing** and premium materials reduces **wear and tear** and generates maximum **availability**.

Design

Modern design combined with quality **materials** and a wide range of **lighting systems** and **outer cladding** boosts the charisma of your building.

Service

Online analysis with error diagnosis, technical **support** or quick **replacement part provision** for older models too – we help you under all circumstances.

Safety

Intelligent **safety sensors** and **online monitoring** from control centre fulfil highest international standards and provide permanent management of your escalator systems.

Innovation

The unique **bus system** for the internet-escalator and countless international **patents** testify to our innovative status in design, safety and technology.

Individuality

Numerous colour, material and finish variations allow **customised** solutions for adaptation to architecture or corporate identity.

Internationality

A dense global **sales** and **service network** puts us always close at hand. International production sites guarantee **short delivery schedules**.

Consulting competence

From **planning** to **assembly** to **service** – competent consulting partners are at your disposal on all issues at all times.

Experience

Your **specialists** for escalators and moving walkways with decades of experience in development, production and assembly, with over 60.000 installed systems **worldwide**.

ThyssenKrupp Elevator (ES/PBB)
www.thyssenkrupp-escalator.com

Your local partner:

