



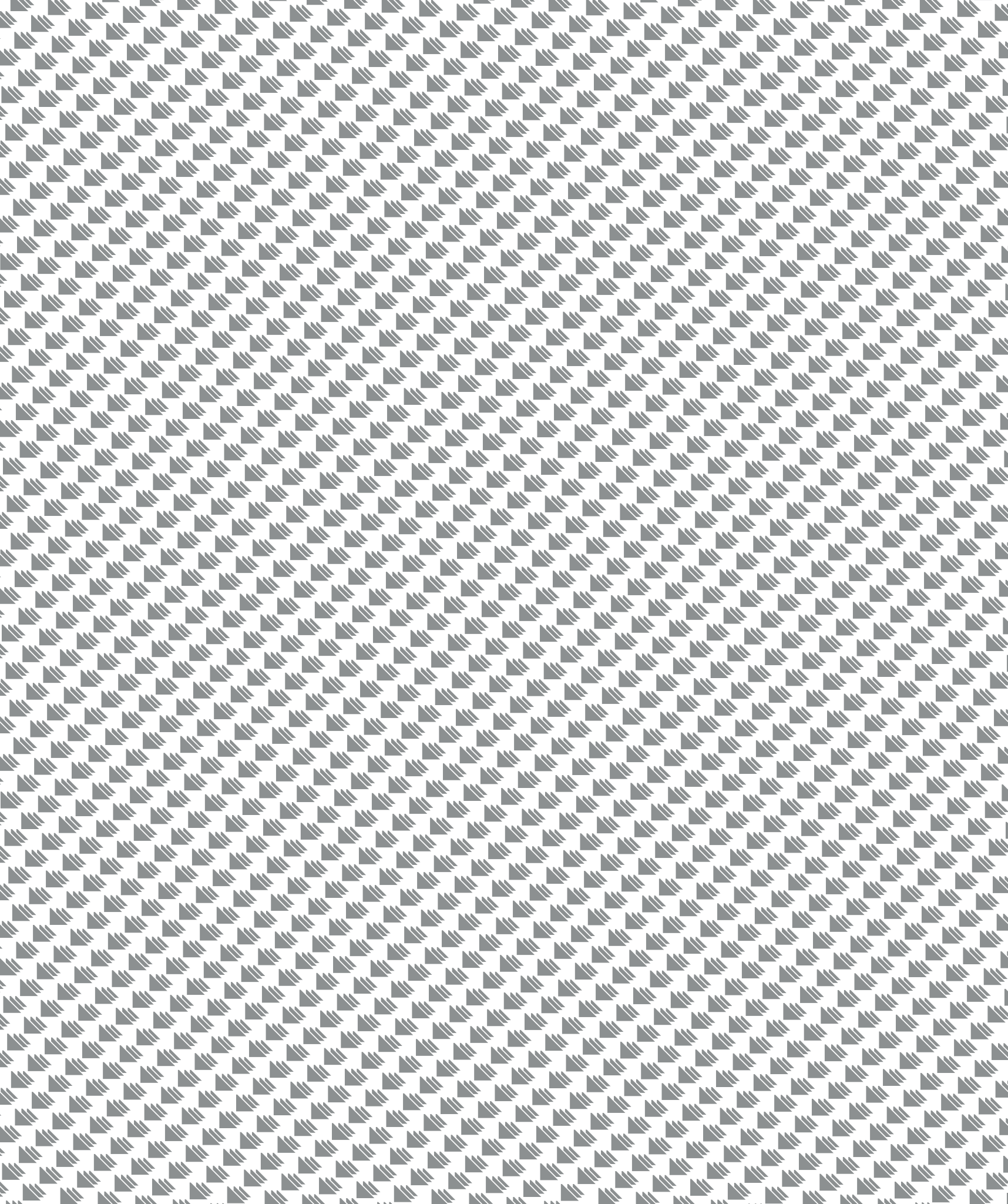
GROUND  
SUPPORT  
EQUIPMENT

tips®

50 YEARS



Premium quality low operation cost



# SUPERIOR SOLUTIONS FOR SAVINGS ALL THROUGH THE LIFE CYCLE

**Welcome to Tips, one of the world's leading manufacturers of premium ground support equipment. For half a century Tips' products are prized for their engineering excellence, low maintenance costs, operational safety, and durability.**

The most important reason for all these is the fact that all our products are made in co-operation with users, and are therefore based on our clients' needs and individualities. Just like no two people are identical, neither are ground support equipment users.

Products are considered superior when they serve their users' needs with maximum efficiency and minimum trouble. We think of our customers as partners whose needs help us design and finish our products to the highest industry standards. Our partners enjoy real-time online support for quick trouble-shooting and repairs as well as specialist training for operation and maintenance.

Premium products are expected to outlast the competition, and this requires extra care for timely introduction of the most advanced technologies. In ground support equipment of today it means gradual transition from diesel to electric power, and introduction of advanced electronic and digital instruments for more precise and safer operating.

Passengers do not expect airlines to compromise on safety. A tiny little thing may decide between life or death. With GSE it may not be quite that dramatic, but opting for superior quality saves our partners a lot of money over many years. And in the ever more environmentally conscious world it means an ever lower carbon footprint, too.

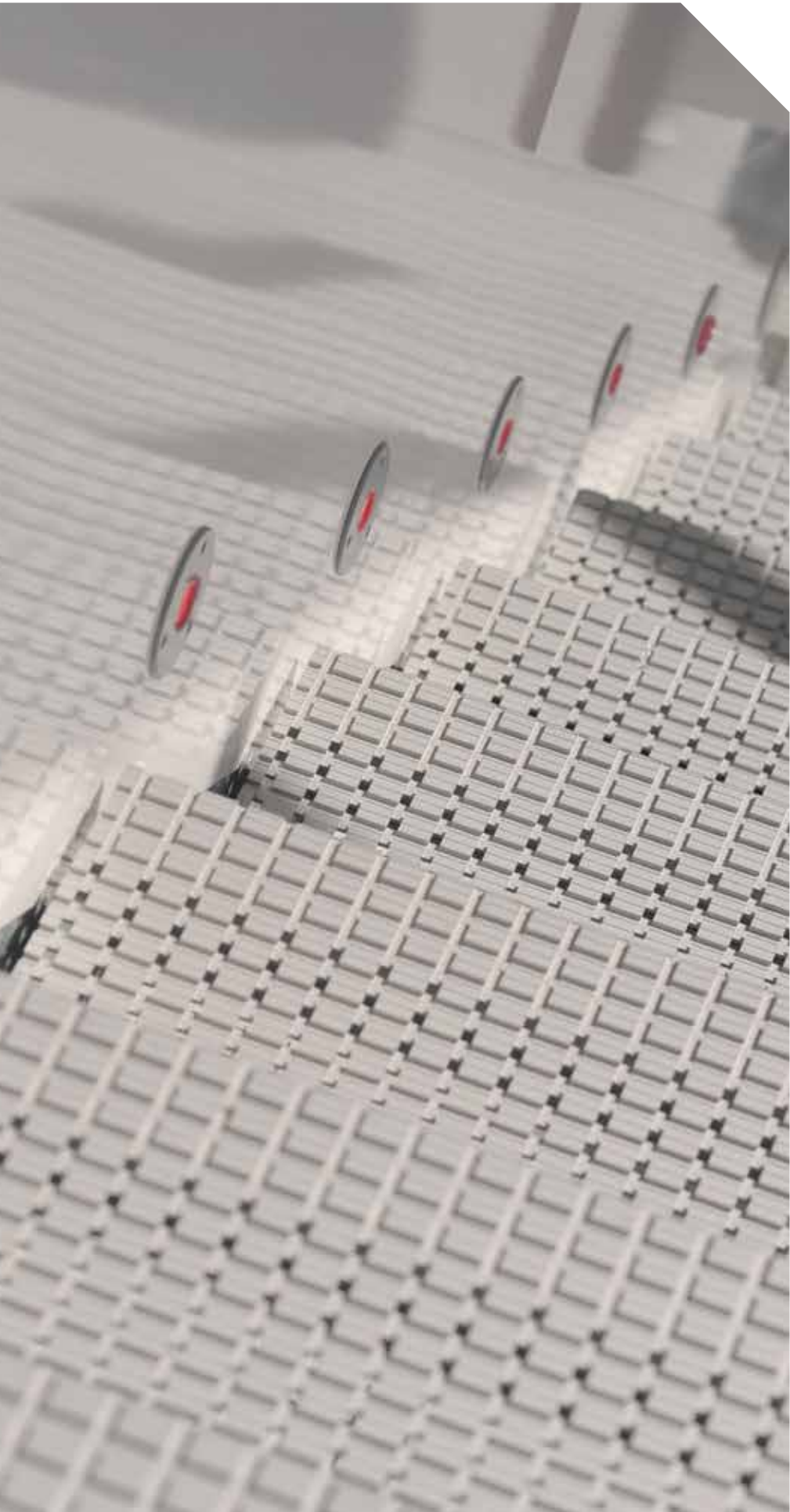
## CONTENTS

<b>4</b>	<b>OPTIONS AND SERVICES</b>
<b>5</b>	<b>TRAINING SPARE PARTS SERVICE ON LOCATION</b>
<b>6</b>	<b>PATENTS</b>
<b>7</b>	<b>STANDARDS</b>
<b>8</b>	<b>PASSENGER STAIRS</b>
9	RUNWAY SERIES
12	FREEWAY SERIES
15	WALKWAY SERIES
<b>16</b>	<b>BELT LOADERS</b>
17	PULLEY & WINCH SERIES
18	PULLEY SERIES
<b>20</b>	<b>TRANSFER TRANSPORTER</b>
19	DECK SERIES
<b>21</b>	<b>POTABLE WATER VEHICLES AND LAVATORY VEHICLES</b>
22	TANK SERIES
<b>24</b>	<b>TOW TRACTOR</b>
25	THRUSTER SERIES
<b>26</b>	<b>DOLLIES AND TRAILERS</b>
27	CARGO SERIES
<b>30</b>	<b>WORKING STAIRS</b>
31	DOCK SERIES
<b>32</b>	<b>SPECIAL ASSIGNMENTS</b>
33	RUNLINE AND FREELINE SERIES
<b>34</b>	<b>TRADITION</b>
<b>36</b>	<b>SOCIAL RESPONSIBILITY</b>
<b>37</b>	<b>VISION MISSION</b>
<b>38</b>	<b>FUTURE</b>
<b>40</b>	<b>TECHNICAL DATA</b>
<b>56</b>	<b>REFERENCES</b>



TIPS d.o.o.  
MDB 15, SI - 8273 Leskovec pri Krškem, Slovenija  
t +386 (0)7 62 03 217, e-mail sales@tips.si

[www.tips.si](http://www.tips.si)



## TIPS SOLUTIONS



Oil free



Maintenance free



Diagnostics



Electro solution



Self sufficient



Li-ion battery



Power battery



Diesel drive



Electric drive



Range extender



Solar panels



Camera



ADPS (Aircraft damage prevention system)



WCL (Wheelchair lift)

WE HAVE  
A SOLUTION  
FOR ALL  
YOUR NEEDS –  
OR WE CAN FIND  
ONE FAST

**An important feature of premium brands is that they allow a high degree of adaptability to buyer's demands. From the moment you've placed your order, our engineers work closely with your team in order to guarantee that you receive equipment that perfectly matches your needs, regarding both your specific technical requirements and/or weather conditions that vary substantially across the globe.**

The aircraft industry development, growing environmental demands and different levels of automation in different countries each mean significantly different expectations regarding premium products, too. With our decades worth of accumulated experience from partners all over the world we are well aware of these differences and they are fully taken into consideration in the design of all Tips products.

A wide range of models and dimensions is the base which allows upgrades with many options, but if you have a specific need that we have not encountered before, we take pride in the quick design and delivery of a totally new technical solution.

This quest for the optimal product for our partner's needs has often led us to innovative solutions that we were able to patent and thus made a lasting contribution to the development of our industry.

# Take full advantage of everything your premium equipment has to offer

People are different, but machines are not – they are designed to perform a very specific task in the most efficient way. We have been working with our partners across the world and we are always available to make sure your equipment is operated and maintained optimally throughout its life cycle.

## TRAINING



### Make the Most of Everything

The world is constantly changing, and we are also adapting our training programs to guarantee that our clients get the most out of their equipment.

Our training staff introduces the partners' crews to even the smallest details and thus the equipment is used and maintained with maximum efficiency. Training also hugely increases the operational safety and reduces the risk of accidents.

## SPARE PARTS



### In the Right Place At the Right Time

Do you need a spare part, but you don't know what it's called? No problem - we've developed a system for tracking installed parts and we'd know exactly what you need just from a basic description of the part or even its photo.

Our engineers will also always be on hand to provide you with the expert advice should you need help with installation.

## SERVICE ON LOCATION



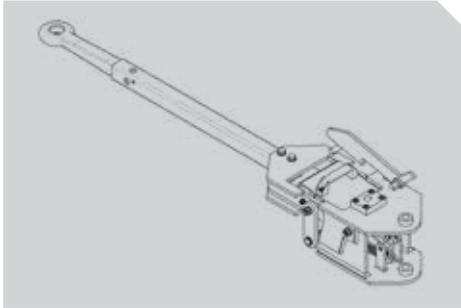
### What Can We Do for You?

Tips preventive technical inspection, as additional measure to periodic servicing, is designed to extend the lifetime of our partners' equipment, increase its efficiency and reduce operating costs.

A preventive inspection analyses the actual state of partners' equipment in order to determine what kind of maintenance would be optimal and/or necessary, both presently and in the future.

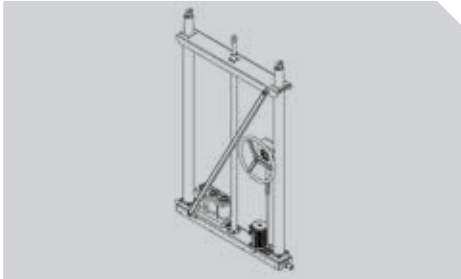
# Patented solutions

Patented solutions for safety, lower costs of use and maintenance, lower energy consumption. We believe that the best way to showcase the way we work and our commitment to your needs are the patents we've obtained recently.



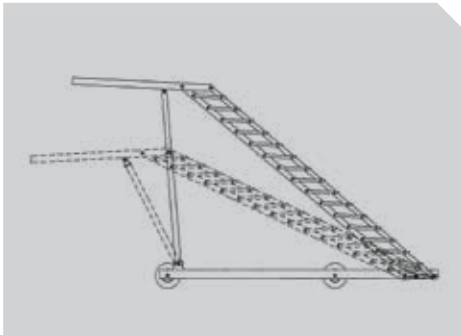
## Parking brake release mechanism in tow

This patented system allows the parking brake's release following a pull or push by a towing vehicle. It eliminates the possibility of human error and also some other deficiencies of the previous simpler system: possible damage to the brake, cargo or equipment and injuries to people due to an uncontrolled displacement, and also the overuse or disproportionate wear of the brake pads and tyres. We have naturally kept all the present strong points: a negative brake, standard application of the tow bar, elevated position and handling with the tow bar.



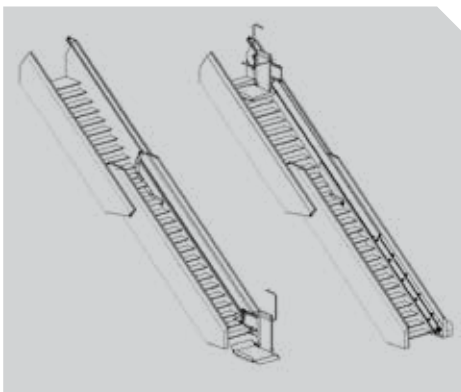
## Platform height adjustment mechanism

This patented mechanism has several solutions for an absolutely parallel lifting of the platform – resulting in a weight distribution within foreseen limits that prevents bending or other construction damage that may lead to the stairs' inoperability. The removal of hydraulic components in the height change function guarantees the system's higher reliability. The hydraulics have been kept on the closed system for the counterbalance needed to reduce the forces for lifting and lowering the platform, which in return permits downsizing to a smaller electric motor and thus cuts energy consumption.



## A parallelogram staircase with a walking surface inclination system for range increase

The standard EN 12312-1 allows for a +/- 3° step inclination from a horizontal level. Our patented solution led to a more than 30% range increase in a 17-stairs model: 2.4-3.8m instead of 2.4-3.5m. This increased range makes it possible to service all the variants of a Boeing 737 (door sill height 2.46–2.79m) and all variants of an Airbus 318-319-320-321 (door sill height 3.43–3.73m) with the same stairs.



## Platform for transporting people with reduced mobility

The transporter for people with reduced mobility, mounted on telescopic passenger stairs, allows transfers from the airport platform to the aircraft (and back) for passengers on either their own wheelchairs or transporter's own seating facility. The platform lift follows the staircase through its entire length so that it stays all the time at the same distance from the walking path. When it reaches the platform's height, the wheelchair is simply pushed on / pulled off the transporter. It has a foldable base and security railing, which permits storage on the platform when the device is not in use. This position also enables unrestricted use of the stairs by other passengers. It is powered electrically and moves gently, ensuring that passengers feel secure and relaxed. Safety features are integrated.

# High standards guarantee good products and a more transparent market

The equipment down time is measured in a lot of money in our industry, and eventual damage claims may run even higher. All Tips products are designed in compliance with the most demanding European standards that guarantee safety and interoperability, cut costs and simplify integration in value and supply chains.

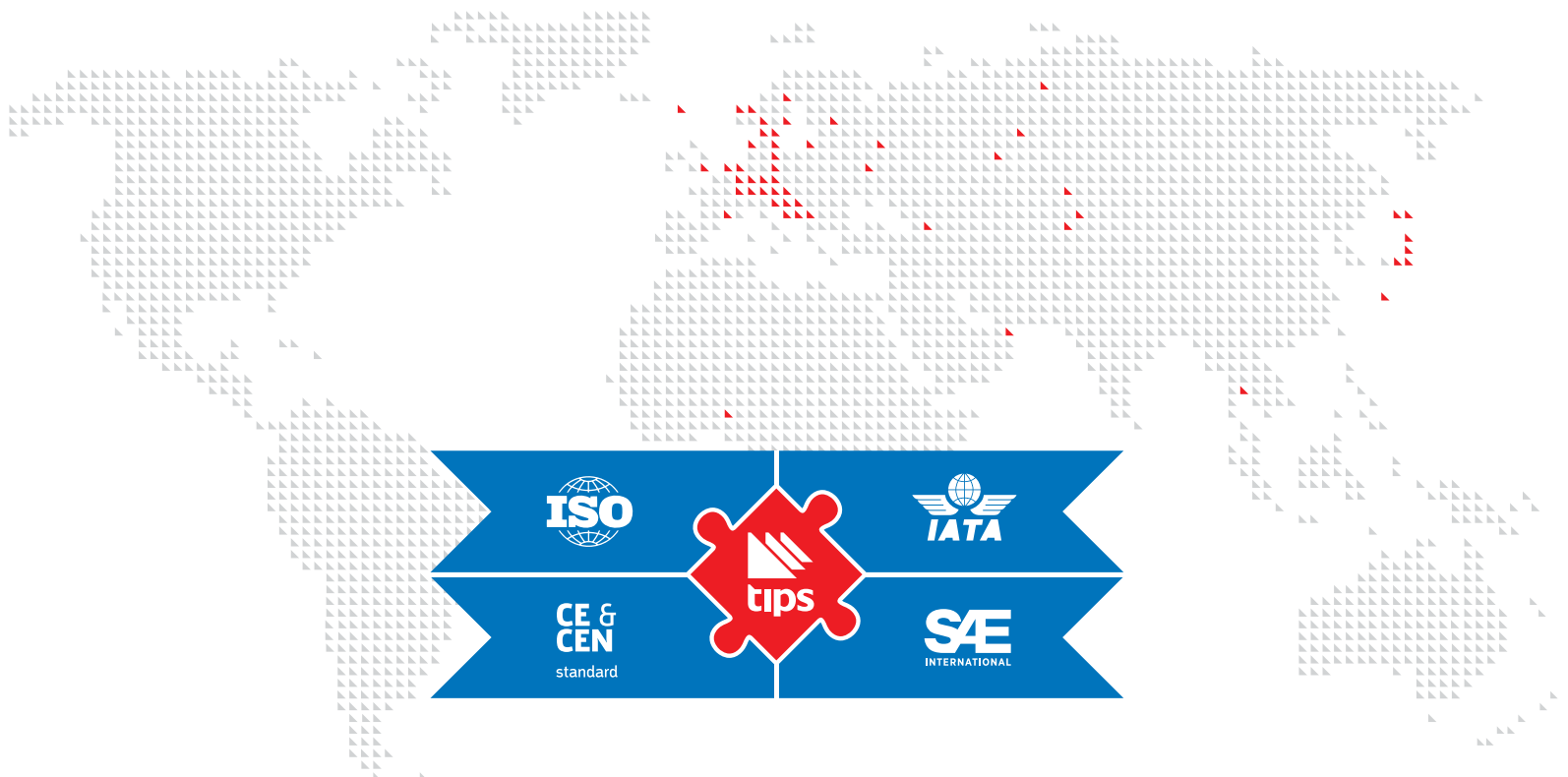
They are harmonized with countries' national standards and also other countries within the CEN system. This also simplifies their eventual resale in any of these countries.

Tips products are therefore not only among the most advanced within our industry, we also strive to contribute to strengthening European manufacturing's reputation and its global positioning.

The most important standards guiding our work are EN 1915 and EN 12312.

We are proud to have obtained the DGUV certificate for the Tips belt loader Pulley 90Ce. The certificate confirms compliance with the applicable CEN standards and the EU's 2006/42/EC directive regarding machinery.

**DGUV Test**  
Prüf- und Zertifizierungsstelle  
Fachbereich Verkehr und Landschaft



# A STAIRWAY TO ANYWHERE

**Modern passenger stairs are designed with practicality and savings in mind: several safety loops prevent errors or mishaps; the ease and precision of operation save time; and automated tracking of executed actions generates real-time data about the job at hand.**

We are especially proud of the horizontally adapting part on the edge of the stairs' platform which is designed to guarantee extreme proximity to the aircraft - without actually touching it. Technically it means that the approach of the stairs is performed in two steps: first its positioning near the airplane, and only then the sensor guided extension of the stairs' platform. This final adjustment is made from the platform with perfect view of both the aircraft and the platform.

Technical advances leading to better manoeuvring capabilities have made driving from platform possible, thereby vastly improving visibility and thus reducing errors and accidents. It is also convenient that operator has eye contact with cabin crew and direct view of the platform.

We are also proud to have solved the problem of the Boeing Dreamliner's passenger door N. 5 - namely its position directly above the cargo door. Tips stairs' platform leaves enough room for baggage handlers to place the belt loader and unload the aircraft during disembarkation.

Tips products come in dimensions that serve all commercial aircraft, from regional planes up to A-380. They are fitted with their own set of lights and optional canopies and folding bellows. Needless to say, all steel parts are hot dip galvanised.

Stairs' surfaces guarantee pleasantly reassuring grip and prevent slipping while at the same time they are very friendly to sensitive footwear, including the most delicate stilettos. Precise engineering leaves no gap between stairway and intermediate platform, and the handrails are integrated.

Stairs' are moved around in many different ways, depending on the model and requirements. Maximum speed is 25 km/h (towing or self-propelled - diesel, electric or hybrid), while other modes allow speeds from 2 up to 15 km/h.

We are very happy that in 2015 we have introduced the world's first fully self-sustained passenger stairs with solar powered drive. The solar cells are mounted on the outside of the staircase railing.

# Runway series



PRODUCT GROUP



**PASSENGER STAIRS**

PRODUCT NAME

RUNWAY

FREEWAY

WALKWAY

OPERATOR'S POST

PLATFORM

CABIN

GROUND

PLATFORM

GROUND

DRIVE

DIESEL DRIVE

ELECTRIC DRIVE

DIESEL DRIVE

ELECTRIC DRIVE

ELECTRIC DRIVE

DIESEL DRIVE

ELECTRIC DRIVE

TOW

# PASSENGER STAIRS



- 
- 
- 
- Li-ion
- 
- D
- E
- D+E
- 
- 
- 
- 



# Runway series



# Freeway series



# Wheelchair lift - option on telescopic passenger stairs



WCL (Wheelchair lift)

# Freeway series



- 
- 
- 
- 
- 
- 
- 
- 
- 
- 
- 
- 





# Walkway series



# WHO WANTS TO TRAVEL LIGHT?

**A matrix of Tips belt loaders' dimensions and engines covers all aircraft from BAe 146 to today's biggest skyliners.**

The machines are fitted with either telescopic or fixed booms of different length, width and finishings.

The largest is 9 metres long, and the shortest starts at 4 metres. This one is available only in telescopic version and fully extended it reaches 6 metres. For bigger models a telescopic boom is optional.

They are all exceptionally stable because of extremely low centre of gravity.

There are four more versions/models plus numerous options, and even the electric drive that allows driving speed up to 25 km/h. Due to the fact that the front axis bears more load, we have designed our standard front wheel drive, which ensures better grip in all weather conditions. It is favoured by airports used to even the harshest winter conditions.

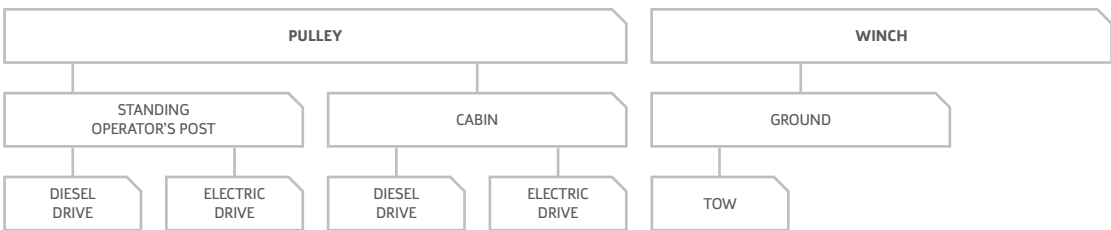
Ergonomically designed driver compartment extras include optional heating and air-condition, and all controls can be used with gloves on. Boom frames have either (depending on a model) steel or aluminium handrails. All models offer adjustable belt speed (up to 0,8 m/s), and all have 24 degrees maximum operational angle.



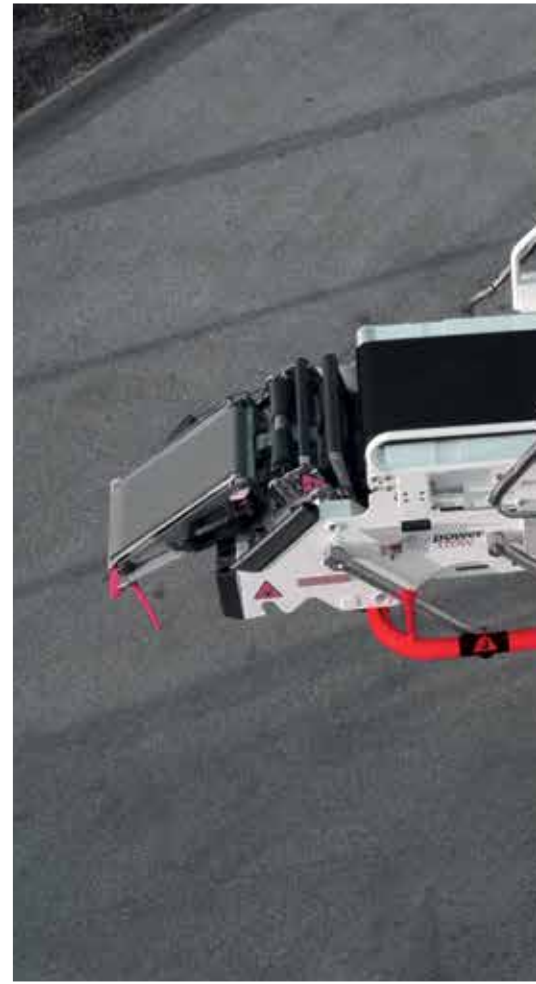
# Pulley & Winch series

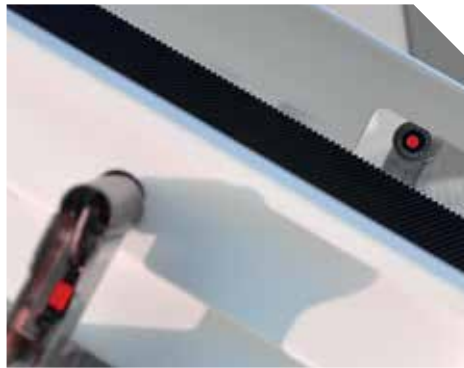


 **BELT LOADERS**



# Pulley series





# BIG IS BEAUTIFUL

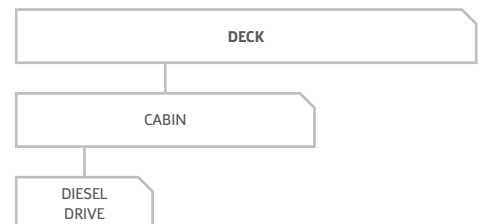
**The 4 metre wide and with 7 metric tonnes load capacity, DECK7000d is a big boy on every airport. Patented pallet stops guarantee safe transport of any container or pallet, and 6 individually powered transfer wheels take care of smooth loading.**

Such a massive vehicle requires 4-wheel steering which allows for an impressive turning circle, and as an option a 4-wheel drive is available. There are several options for driver's compartment, too, starting with open or closed space and with right- or left-hand drive. In any case optimum all-round view is never compromised.

A Deutz diesel engine operates in two drive stages, one set at 13 km/h, and the other at 30 km/h, which allows for both fast and precise transfer of heavy cargo units.



## TRANSFER TRANSPORTER





Deck series



# WHAT GOES UP MUST COME DOWN



**TANK vehicles perform essential ground services with great efficiency and precision. Both vehicles service all types of aircraft and may be fitted with a vertically moving work platform. On custom chassis vehicles the operator can also control the vehicle (crawl mode only) to manoeuvre it into the optimal operating position for him.**

Ground level driving compartment offers many options, and the Deutz diesel engine allows driving speed up to 25 km/h.

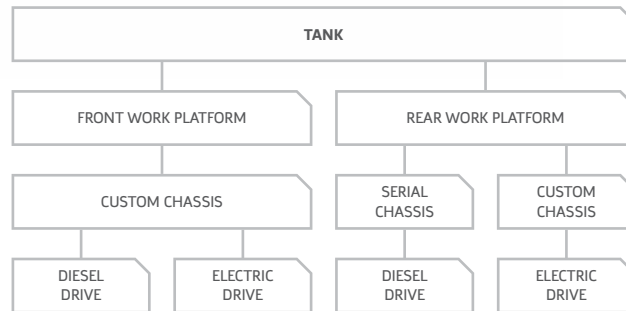
Potable water service vehicles come with one or two tanks (potable water/ unused potable water). Three tanks (waste/rinse and disinfectant) or two (waste /rinse) come in sanitary vehicles, depending on vehicle type and customers' demands. Three tanks (waste / rinse / disinfectant) come in a sanitary vehicle, depending on vehicle type and customer's demands. The tanks' dimensions may vary within preset vehicle measurements which guarantee servicing of all aircraft types and airline requirements.

Both service vehicles can be delivered in a version mounted on truck chassis. There are three different sizes of chassis available, which can be equipped with different sizes of reservoirs.



Tank series

 **POTABLE WATER AND LAVATORY VEHICLES**



# A STRONG SMALL VEHICLE THAT NEVER STOPS

**Tips electric tractor for transporting baggage and equipment comes with a wide range of options that allow you to adjust it to your needs.**

An automatic system for hitching the load is at the rear of the vehicle; front hitching is optional. To simplify hitching, the tractor is equipped with an inching switch for forward and backward moves.

To secure optimal energy use and lower lifetime costs, the tractor has three independent braking systems: an electro-regenerative one on the drive axle, hydraulics on all four wheels, plus a mechanical parking brake on the electric motor.

Large windows on all four sides guarantee excellent vision and air circulation. Sliding doors are on both sides of the vehicle. Driver's comfort is provided by a spring mounted seat and (optional) diesel heating and ventilation of the cabin.

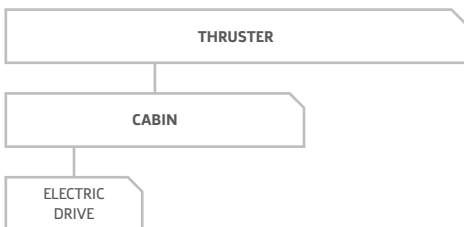
With a towing capacity of up to 8,600kg and a mere 8.5m wide turning circle, this little one is a performance giant.



## Thruster series



**TOW TRACTOR**



# SUPERIOR QUALITY AND MAINTENANCE DEFY TIME

**At first, baggage trailers may not seem to be a major technical achievement. Yet we believe you would highly appreciate if you did not need to buy new ones after a few years use, but kept them in service for several decades, provided they were maintained according to Tips recommendations.**

We are exceptionally proud that more than a few trailers, made in the early years of our company, are still in use after almost half a century. We regard them as proof of both a sturdy design and well planned and executed maintenance. Thus a company that is outstandingly committed to development and technical progress actually lives by the timeless values of reliability and durability.

In other words: the majority of Tips products leave service because of your changed needs and not because they have reached a point beyond repair.

Changed needs obviously stem from globalization on the one hand and from a large increase in air travel on the other. This means more numerous and more varied demands that you need to meet, and in vastly different circumstances.

The Tips range of trailers and dollies offers many sizes and capabilities. They allow us to be flexible about functional and climate requirements, and for you it means the certainty to meet both high passenger numbers on the one hand and also the needs of the most demanding travellers on the other.



# Cargo series

**CARGO**0024C



**CARGO**0030C



**CARGO**0080C

**CONTAINER DOLLIES AND FREIGHT TRAILERS**



**CARGO1712B**

**CARGO2515B**



**CARGO2710B**



**CARGO1713B**

**CARGO3013B**



**CARGO2710B**



**CARGO7730F**



**CARGO0125F**

**CARGO2014V**



**CARGO1911S**



**CARGO2766F**



# WORKING AND STORAGE STAIRS

**DOCK working stairs are made for technical and maintenance crews who service aircraft either in between flights on airport grounds (W series) or during various maintenance operations in storage (S series).**

Different heights allow work at different sections of the aircraft. The W series stairs' range from 1.25 to 5.50 m, and the S series from 2.75 to 4.00 m, but it offers a much bigger platform work area. The fuselage is protected by a thick protective bumper at the front and on both sides of the working platform.

All stairs are towable and fixed to a work station by four mechanical stabilizers which are built within the stairs' framework for safety. Stabilizers' handling is made easier by gas springs.

Apart from the stabilizers' lubrication, DOCK stairs require no maintenance, and the hot-dip galvanized steel construction guarantees a significantly longer lifetime as well as lower overall costs due to the minimal maintenance.





 **WORKING STAIRS**



Dock series

# SELF-PROPELLED WORKING STAIRS WITH COVERED WORK AREA

**This new working stairs provide technical crews who deliver aircraft to buyers the most focused and safe working area on an elevated platform. The initiative for the development of this mobile “workshop” came from airplane manufacturers who know all about their aircraft and their most sensitive spots.**

The RUNLINE model leaves most of the handling to the operators. Naturally it has been designed and manufactured in compliance with CE standards which guarantee users' safety.

The FREELINE model is a high-tech product, made to meet and exceed the expectations of aircraft manufacturers and the most demanding airlines. It naturally guarantees the touchless fit of the platform and aircraft. As this has already been accepted as an IATA standard (Airport Handling Manual), we may soon expect its application everywhere in the world.

# Runline and Freeline series



- 
- 
- 
- 
- 
- 
- Li-ion**
- 
- E**
- 
- D+E**
- 
- 
- 
- 

**D**



RUNLINE SERIES



FREELINE SERIES



FREELINE SERIES

# Family Business, Global Range

We trace our beginnings back to 1969, when Mr. Stane Pustavrh started an engineering company for fitting special purpose vehicles and a car body workshop. Already in its second year the company has received its first orders for GSE. These early efforts were performed with such precision and quality that some of the service vehicles and equipment from the 1970s are still in use today in full functionality.

Through the years we have acquired ever more knowledge and sophisticated skills. These expertise combined with commitment of the founding-managing Pustavrh family and the passion for staying on top, rather even a step or two ahead of the GSE trends, has time and again proved a magic formula for international success.

The largest airports from all over the world are reconfirming the quality of TIPS products with their new orders and we are really proud to have such a long list of regular partners.

## TIMELINE:

- 1969 Establishment of the company as a specialist vehicle workshop
- 1970 Airport equipment productions begins
- 1980 Airport equipment becomes the main product
- 1991 Spray cabin manufacturing begins
- 2004 Mr. Robert Pustavrh takes over executive management
- 2005 Co-operation with Josef Meyer Wagon AG begins
- 2006 New production facilities
- 2007 Acquisition of the product line from Josef Meyer Wagon AG
- 2013 Development of the next generation of belt loaders
- 2014 Announcing tow tractor series
- 2015 Development of self-sustained solar powered passenger stairs
- 2015 New company corporate logo
- 2016 First TIPS tow tractor presented to the public
- 2016 Introducing new technology in the GSE field – a substitute for conventional diesel drives (range extender)
- 2016 Long range and platform controlled passenger stairs
- 2016 Patents for passenger stairs acquired
- 2016 Launch of the first products from Special Assignments series
- 2017 Enlarged production facilities
- 2017 First delivery of the DOCK series stairs
- 2017 The whole TIPS range is in compliance with AHM "Aircraft damage prevention requirements"
- 2018 First delivery of the new generation of water and sanitary vehicles
- 2018 Enlarged production facilities
- 2018 The most successful business year
- 2019 Parallelogram passenger staircase FREEWAY2438Pe with front-wheel drive
- 2019 First delivery of the platform for passengers with reduced mobility
- 2019 First delivery of the small water vehicle TANK0707Pr



# tips



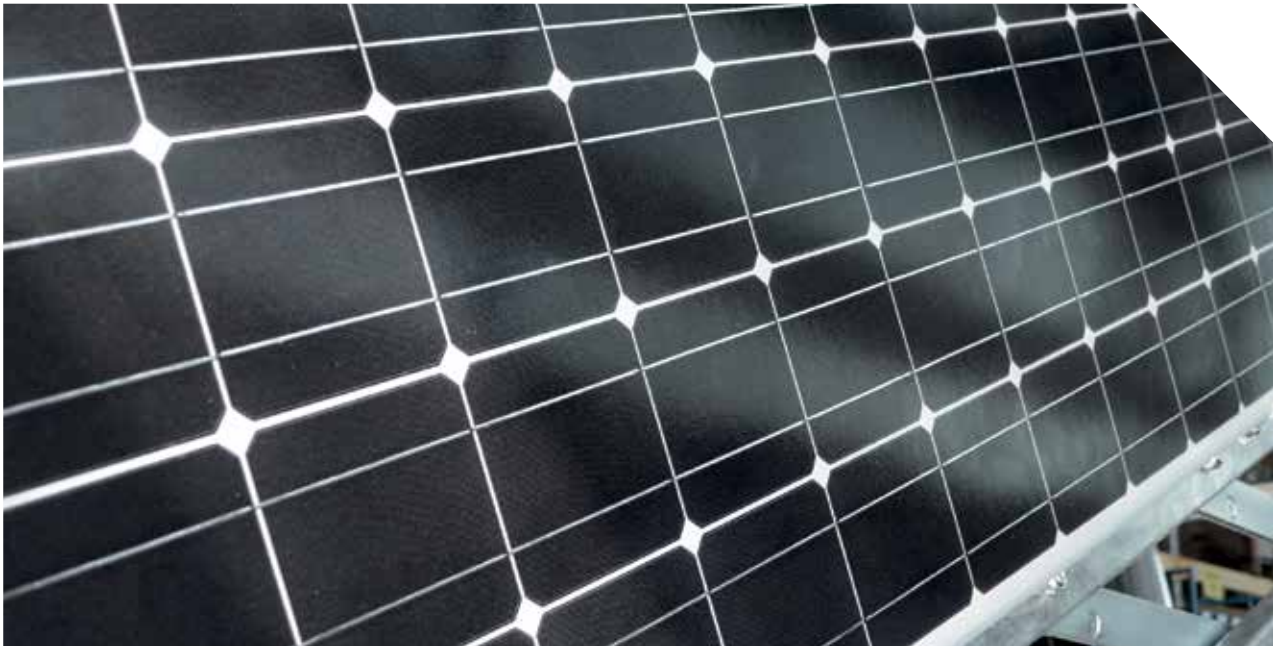
# Environment Friendlier GSE

Tips corporate and social responsibility springs from our primary mission to be at the cutting edge of GSE development. Permanently and in all our activities we strive for an environmentally friendly, reliable and cost effective products and services.

We employ the resources at our disposal responsibly in order to protect the environment and to pass on to the future generations a planet in better condition.

An important part of our responsibilities is the operational safety of our products. This includes both safety of our own and our customers' workers, and also the local and broader environment in which we live and work.

Tips is a respected corporate member of the local community. We also work closely with regional schools to help educate future employees.



## SUSTAINABLE SUPPLY OF GSE INCLUDES:



reducing our products' carbon footprint by optimising production processes



using renewable energy sources



choosing the shortest transport routes



continuous development of environment friendly technologies and products

## VISION

World Leader  
in Customer  
Satisfaction

## MISSION

Shape the  
Future of the  
Industry



We aim to strengthen our position as one of the world's leading GSE providers.

We pursue this goal by strengthening long-term business links and partnerships in the fields of product development, supply, after-sales services and marketing.

We believe that we can take the level of our customers' satisfaction even higher.

We create advanced, high-quality, reliable GSE, which provides our customers with cost-effective, fast, safe and environmentally friendly equipment for aircrafts' ground handling.

Our mission is to provide tailor-made and complete solutions which contribute to the overall quality of our clients' services at all levels. With our products we wish to raise standards and take active part in the GSE industry future development.

The main feature of our products and services is and will be the highest quality, delivered at the agreed time and for a competitive price.

# Dreaming Up Future Challenges

As one of the world's leading provider of top end GSE, Tips is constantly looking for new ways to improve its products and services in order to better serve our customers and be a better corporate citizen of the world.

Our efforts are currently above all concentrated into lowering our products' carbon footprint and we focus primarily on the power source: Tips products are increasingly powered by electricity, the most recent ones even self-sustained by solar cells mounted on the passenger stairs' frame.

We are also replacing hydraulic systems with electric ones, wherever possible, thus reducing maintenance and energy consumption. Transition to electricity may worry some airports without state-of-the-art electric charging stations, but as early as a decade ago Tips has introduced (on all units) an electric on-board charger that can be used at any socket type.

Conversion to electric power means lower costs and lower carbon footprint that benefit both our customers and the future generations.

Tips engineers also work hard on perfecting digital commands, based on sensors, and displayed on screens with ever increasing accuracy.

All these prevent physical contact of all Tips brand GSE units with aircraft they are serving. Another tool in development at Tips is an integrated log of unit's physical contacts with the aircraft which could be useful in the future when airports may need a proof that their GSE had not been in physical touch with an airplane from composite materials on which damage will have been noticed.

Sometimes it may not feel too good to be in between, like in Tips case between a destination and a means of transportation. Well, that depends: the best part of the sandwich is usually right in between, too, and we at Tips are looking into ways to enhance the passengers' experience of a special welcome, either in coming on board or in taking the very last steps towards their desired destination.

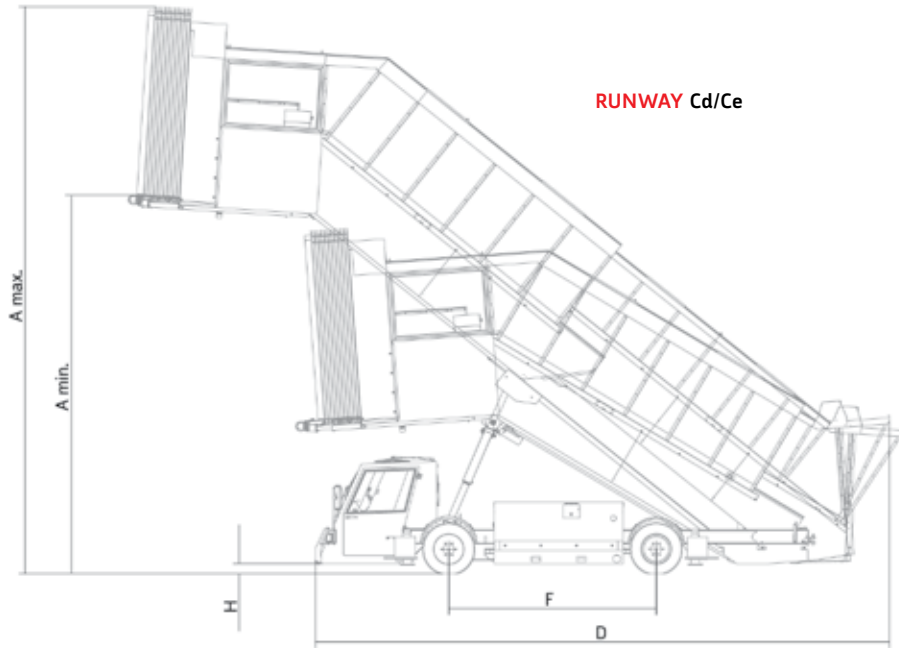


## TECHNICAL DATA

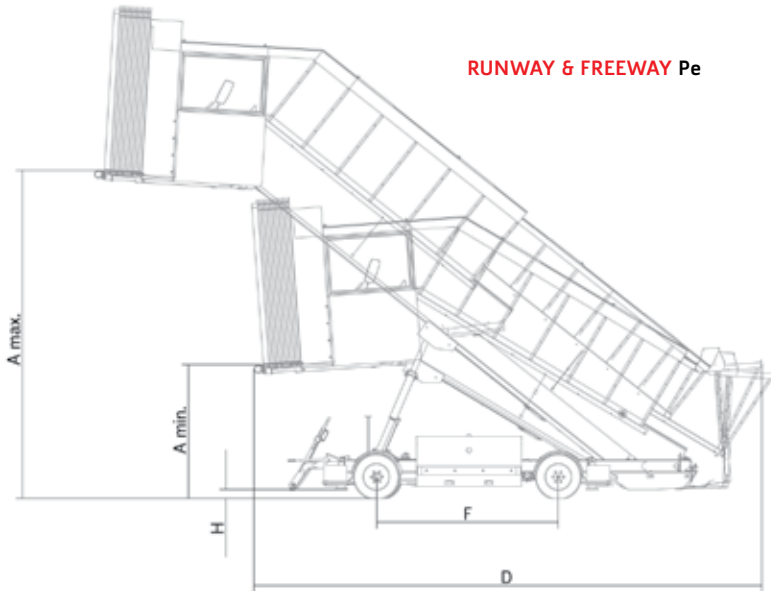
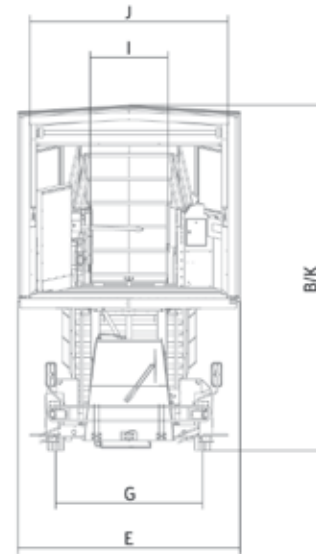
TIPS PASSENGER STAIRS			Ranges		Operator's post			Energy source			Model
Tow unit	Low speed self propelled unit with boosted functions (Max 6 km/h)	Self propelled unit (Max 15 or 25 km/h)	Lowest point of the platform [dm - decimetre]	Highest point of the platform [dm - decimetre]	<b>T</b> ow bar: Operator's post beside the control bar (pedestrian) in front of the step	<b>C</b> abin: Operator's post in the cabin	<b>P</b> latform: Standing operator's post on the platform	Tow tractor	<b>D</b> iesel: 9kW, 14 kW, 37 kW or 57 kW	<b>E</b> lectric: 24 V or 80 V, depends on the driving speed	All possible versions
WALKWAY			12	19	T			/			WALKWAY1219T
			13	21	T			/			WALKWAY1321T
			15	23	T			/			WALKWAY1523T
			16	25	T			/			WALKWAY1625T
			18	28	T			/			WALKWAY1828T
			19	30	T			/			WALKWAY1930T
			20	32	T			/			WALKWAY2032T
			22	34	T			/			WALKWAY2234T
			23	36	T			/			WALKWAY2336T
		24	38	T			/			WALKWAY2438T	
	FREEWAY		24	38	T				d	e	FREEWAY2438Td / Te
			24	38			P		d	e	FREEWAY2438Pd / Pe
			18	42			P		d	e	FREEWAY1842Pd / Pe
			22	46			P		d	e	FREEWAY2246Pd / Pe
			24	58			P		d	e	FREEWAY2458Pd / Pe
		RUNWAY	18	42			P		d	e	RUNWAY1842Pd / Pe
			18	42		C			d	e	RUNWAY1842Cd / Ce
			22	46			P		d	e	RUNWAY2246Pd / Pe
			22	46		C			d	e	RUNWAY2246Cd / Ce
			24	58			P		d	e	RUNWAY2458Pd / Pe
			24	58		C			d	e	RUNWAY2458Cd / Ce



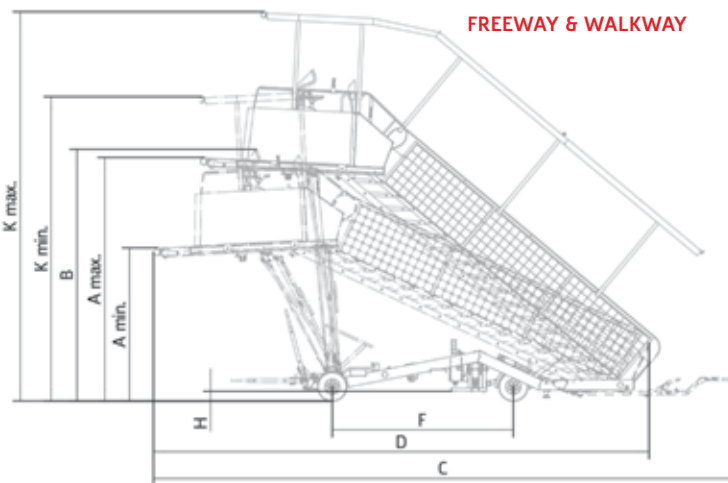
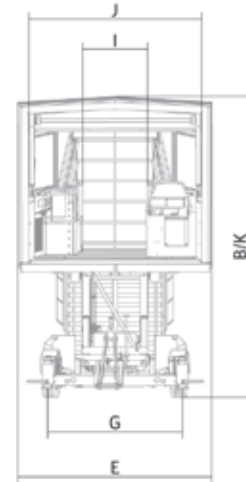
<b>TIPS PASSENGER STAIRS</b>	WALKWAY1219	WALKWAY1321	WALKWAY1523	WALKWAY1625	WALKWAY1828	WALKWAY1930	WALKWAY2032	WALKWAY2234	WALKWAY2336	WALKWAY2438 FREEWAY2438	FREEWAY1842 RUNWAY1842P	FREEWAY2246 RUNWAY2246P	FREEWAY2458 RUNWAY2458P	RUNWAY1842C	RUNWAY2246C	RUNWAY2458C
<b>Technical data</b>	PARALELOGRAM										TELESCOPIC					
<b>A min</b> - Platform height (mm)	1.161	1.302	1.444	1.585	1.726	1.881	2.009	2.151	2.292	2.382	1.765	2.123	2.363	1.765	2.123	2.363
<b>A max</b> - Platform height (mm)	1.864	2.080	2.296	2.512	2.728	2.930	3.160	3.376	3.592	3.789	4.187	4.549	5.776	4.187	4.549	5.776
<b>B</b> - Towing height (mm)	2.382	2.463	2.608	2.806	2.888	3.029	3.171	3.312	3.453	3.634	3.063	3.341	3.788	4.350	5.060	4.965
<b>C</b> - Towing length (mm)	5.682	5.987	6.292	6.597	6.901	6.952	7.511	7.188	7.315	7.718	8.030	8.891	9.435	7.066	7.878	7.878
<b>D</b> - Parking length (mm)	4.343	4.648	4.991	5.283	5.600	5.613	6.210	6.986	7.315	7.718	6.640	7.750	8.401	7.066	7.878	7.878
<b>E</b> - Overall width (mm)	2.332	2.332	2.332	2.332	2.332	2.332	2.332	2.324	2.324	2.324	3.500	3.500	3.500	3.500	3.500	3.500
<b>F</b> - Wheelbase (mm)	2.500	2.500	3.065	3.065	3.065	3.065	2.821	2.821	2.821	2.821	3.200	3.200	3.200	3.200	3.200	3.200
<b>G</b> - Track (mm)	2.072	2.072	2.072	2.072	2.072	2.203	2.203	2.164	2.164	2.164	2.290	2.290	2.290	2.290	2.290	2.290
<b>H</b> - Ground clearance (mm)	150	150	150	150	150	150	150	150	150	150	150	150	150	150	150	150
<b>I</b> - Internal stairflight width (mm)	1.214	1.214	1.214	1.214	1.214	1.214	1.214	1.215	1.215	1.215	1.200	1.200	1.200	1.200	1.200	1.200
<b>J</b> - Internal platform width (mm)	2.108	2.108	2.108	2.108	2.108	2.108	2.108	2.183	2.183	2.183	2.900	2.900	2.900	2.900	2.900	2.900
<b>K</b> - Minimal headroom with roof (mm)	/	/	/	/	/	/	/	/	/	4.800	4.350	5.060	5.350	4.350	5.060	5.350
Nr. of steps	8	9	10	11	12	13	14	15	16	17	19	21	27	19	21	27
Step height (mm)	157 - 202										189	189	189	189	189	189
Step depth (mm)	300	300	300	300	300	300	300	300	300	300	300	300	300	300	300	300
Turning circle (wall – wall) (m)	12		14					15			16			16		
Stairflight inclination	25°- 40°										32°-38°			32°-38°		
Platform and step inclination	-3° / +3°										-3° / +3°			-3° / +3°		
<b>Load capacity, weight</b>																
Total number of persons	26	28	30	32	34	36	38	40	42	44	55	63	75	55	63	75
Stairs nett weight (ca.) (kg)	960	1.000	1.050	1.150	1.210	1.280	1.350	1.600	1.750	1.900 / 2.380	7.300	7.400	7.500	7.350	7.450	7.550
<b>Wind stability</b>																
Allowed wind speed in working stabilized position (kn)	45	45	45	45	45	45	45	45	45	45	50	50	50	50	50	50
<b>Velocity</b>																
Drive speed (km/h)	0	0	0	0	0	0	0	0	0	0 / 6	6 / 15	6 / 15	6 / 15	25	25	25



**RUNWAY Cd/Ce**



**RUNWAY & FREEWAY Pe**

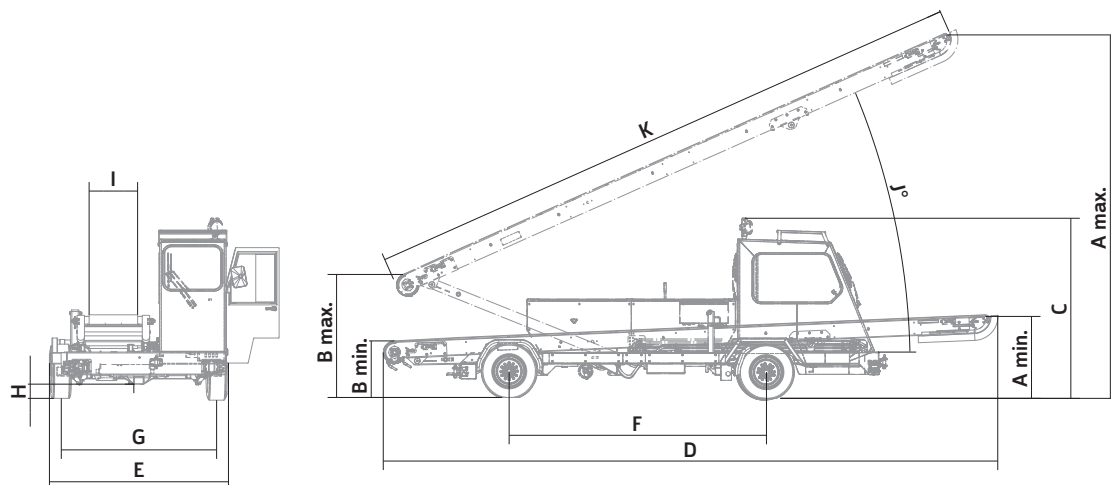


**FREEWAY & WALKWAY**



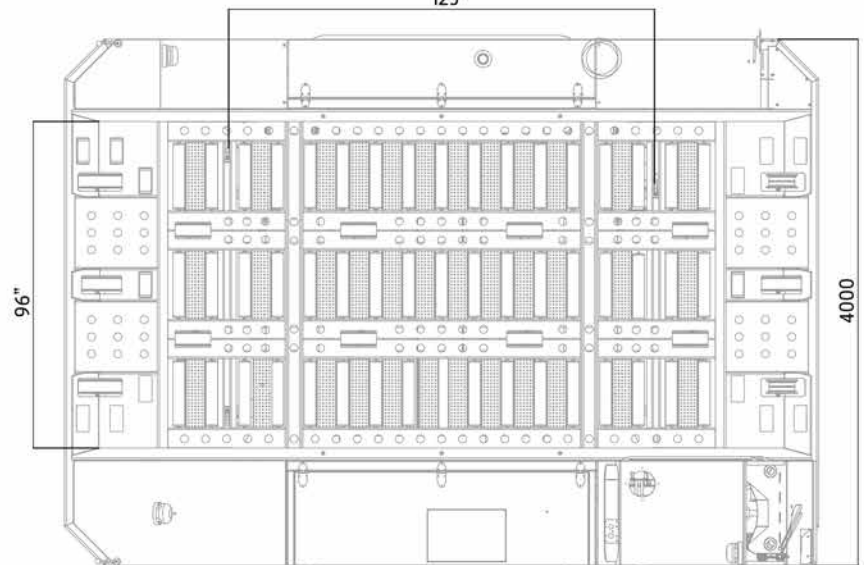
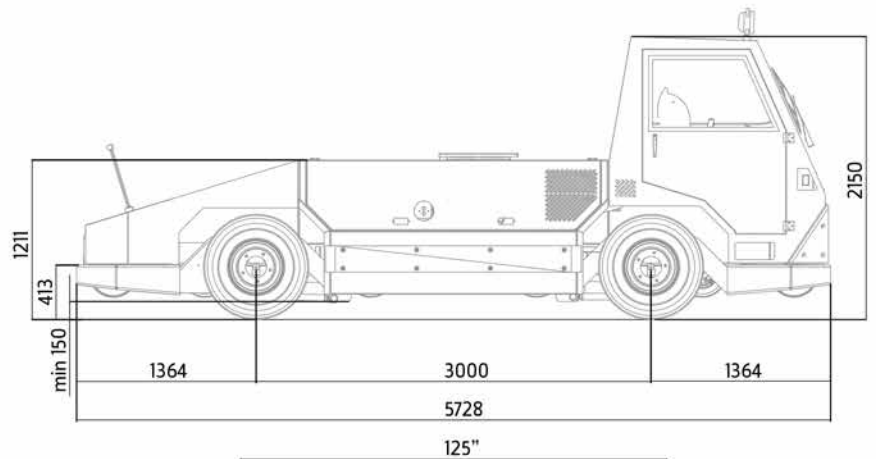
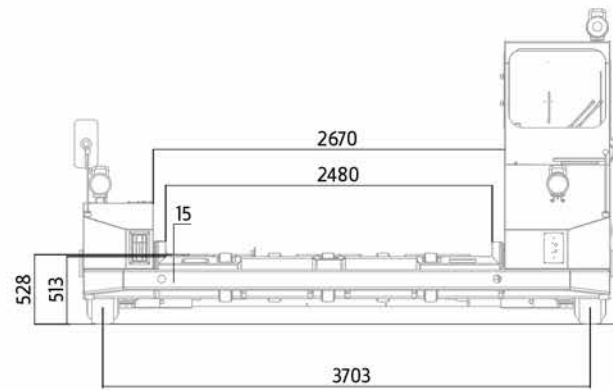


TIPS BELT LOADER	WINCH75T	WINCH90T	PULLEY46C	PULLEY75C/S	PULLEY69C/S	PULLEY90C/S
<b>Technical data</b>						
A max - Maximal reaching height of conveyor, front (mm)	4.509	5.211	3.000	4.509	5.178	5.211
A min - Minimal reaching height of conveyor, front (mm)	1.070	1.070	1.000	1.070	1.050	1.070
B max - Maximal reaching height of conveyor, rear (mm)	1.516	1.516	1.400	1.516	1.500	1.516
B min - Minimal reaching height of conveyor, rear (mm)	712	712	700	712	675	712
C - Minimal vehicle height (mm)	1.200	1.200	1.200	1.955	1.987	1.987
D - Minimal vehicle length (mm)	7.604	9.122	4.100	7.604	6.703	9.122
E - Overall width (mm)	1.800	1.800	1.750	2.150	2.155	2.155
F - Wheelbase (mm)	3.200	3.200	2.000	3.170	3.170	3.170
G - Wheel track (mm)	1.550	1.550	1.290	1.930	1.930	1.930
H - Clearance (mm)	170	170	150	170	170	170
I - Belt width (mm)	600/800	600/800	600	600/800	600	600/800
J - Boom inclination	0 - 24°	0 - 24°	0 - 24°	0 - 24°	0 - 24°	0 - 24°
K - Boom length (m)	7,5	9	4 - 6	7,5	6 - 9	9
Belt speed (m/s)	0.1 - 0.6	0.1 - 0.6	0.2 - 0.8	0.1 - 0.6	0.1 - 0.6	0.1 - 0.6
Turning circle (wall-wall) (mm)	11.000	11.000	8.050	11.000	11.000	11.000
<b>Capacity, weight</b>						
Max load on belt (kg/m)	135	135	50	135	135	135
Nett weight (ca.) (kg)	1.650	1.890	3.300	4.000	4.270	4.200
<b>Wind stability</b>						
Allowed wind speed	45 kn					
<b>Velocity</b>						
Maximal Tow speed	25	25	25	25	25	25
Maximal driving speed (km/h)			25	30	30	30



## TECHNICAL DATA

<b>TIPS TRANSFER TRANSPORTER</b>		<b>DECK7000d</b>
<b>Technical data</b>		
Length (mm)	5.728	
Width (mm)	4.000	
Height (mm)	2.150	
Wheelbase (mm)	3.000	
Track (mm)	3.700	
Weight (kg)	5.000	
Turning circle (wall-wall) (mm)	13.500	
Engine	DEUTZ diesel	
Hydraulic oil tank (l)	160	
Fuel tank (l)	140	
Driving speed (km/h)	25	
Transfer speed (m/min)	0-18	
Load capacity (kg)	7.000	
Electric system (V/Ah)	24/150	
<b>Range of use</b>		
LD-1		x
LD-2		
LD-3		x
LD-4		
LD-5		
LD-6		
LD-7		
LD-8		
LD-9		
LD-10		
LD-11		x
LD-26		
LD-29		
61,5"x60"4		x
88"x108"		x
88"x125"		x
96"x60,4"		
96"x125"		x
125"x60,4"		
20ft		

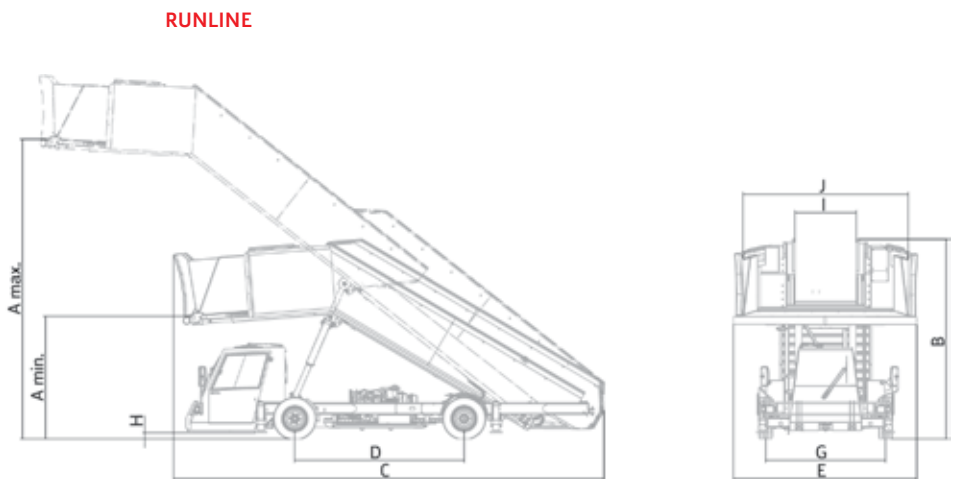
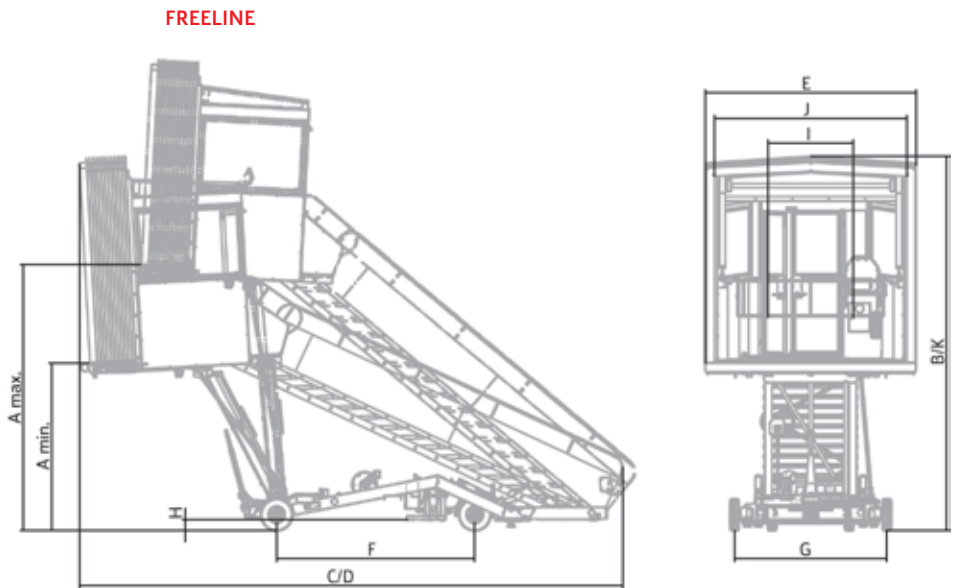


TIPS CUSTOM STAIRS	FREELINE2438Pe	RUNLINE1842Cd	RUNLINE2458Cd
--------------------	----------------	---------------	---------------

Technical data			
Amin - Minimal platform height (mm)	2.377	1.765	2.363
Amax - Maximal platform height (mm)	3.779	4.187	5.776
B - Towing height (mm)	5.318	3.063	3.788
C - Towing length (mm)	7.743	8.030	9.435
D - Parking length (mm)	7.743	6.640	8.401
E - Overall width (mm)	3.002	3.500	3.500
F - Wheelbase (mm)	2.821	3.200	3.200
G - Track (mm)	2.170	2.290	2.290
H - Ground clearance (mm)	150	150	150
I - Internal stairflight width (mm)	1.210	1.200	1.200
J - Internal platform width (mm)	2.651	2.900	2.900
K - Minimal headroom with roof (mm)	5.317	4.350	5.350
Nr. of steps	17	19	27
Step height (mm)	157 - 202	189	189
Step depth (mm)	300	300	300
Turning circle (wall - wall) (m)	16	16	
Stairflight inclination	25° - 40°	32° - 38°	
Platform and step inclination		-3° / +3°	

Load capacity, weight			
Total number of persons	46	55	75
Stairs nett weight (ca.) (kg)	3.071	7.300	7.500

Wind stability			
Allowed wind speed in working stabilized position (kn)	45	50	50
Velocity			
Drive speed (km/h)	6	25	25
Towing speed (km/h)	25	/	/

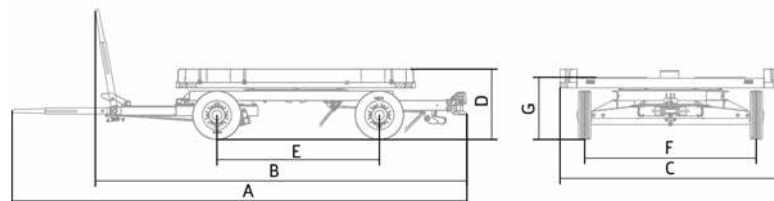


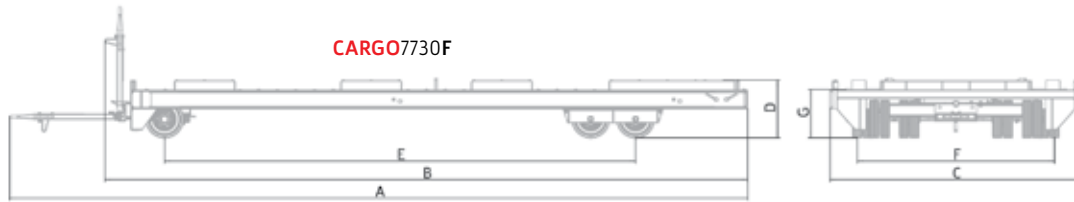
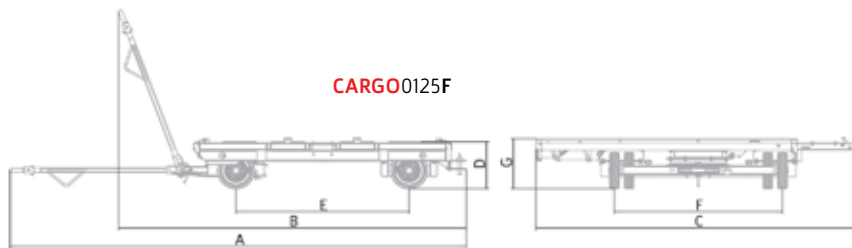
## TECHNICAL DATA

TIPS CONTAINER DOLLIES AND FREIGHT TRAILERS	CARGO 0024C	CARGO 0030C	CARGO 0034C	CARGO 0080C	CARGO 0011C	CARGO 0125F	CARGO 7730F	CARGO 2766F
<b>Technical data</b>								
A - Length (mm)	3.754	3.765	3.765	4.200	5.050	4.800	3.743	7.902
B - Length (raised towbar) (mm)	3.065	3.045	3.045	3.645	4.890	3.329	3.012	7.219
C - Width (mm)	1.820	1.820	1.820	1.820	1.820	3.560	3.400	2.700
D - Height (mm)	576	565	565	570	560	565	600	615
E - Wheelbase (mm)	1.340	1.500	1.500	1.750	1.750	1.900	1.656	4.400
F - Wheel track (mm)	1.415	1.630	1.630	1.630	1.630	1.841	2.185	2.100
G - Roller height	508	508	508	508	508	508	508	508
Cargo capacity (kg)	1.600	1.800	2.700	2.700	3.500	7.000	6.800	15.000
Weight (kg)	500	700	700	850	770	1.070	1.230	3.000
Turning circle (wall-wall) (mm)	8.300	8.400	8.400	9.200	9.200	11.000	10.500	13.100
Overrun brake						o		
Internal code	KD-24	CD-30	CD-34	CD-80	CD-11	FT-125	FT-7730	FT-2766
<b>Range of use</b>								
LD-1	s	s		o	o	o		
LD-2	o	o	o	o	o	o		
LD-3	s	s	o	o	o	o		
LD-4			s	s	o	o	o	
LD-5					s	o		
LD-6					s	o		
LD-7						s		
LD-8				s	o	o		
LD-9						s		
LD-10					s	o		
LD-11					s	o		
LD-26								
LD-29						s		
61,5"x60,4"					o			
96"x 60,4"					o			o
108"x 88"						s	s	
125"x60,4"					s	o		
125"x 88"						s	s	o
125"x 96"						s	s	o
20ft								s

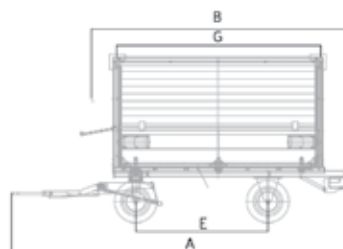
s - standard, o - option

CARGO 0024C  
CARGO 0030C  
CARGO 0034C  
CARGO 0080C  
CARGO 0011C

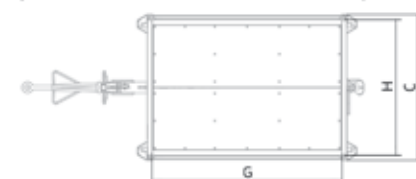
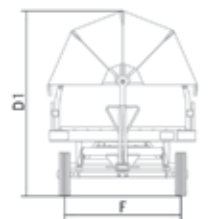
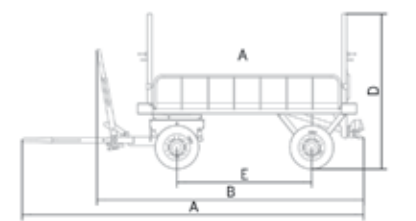
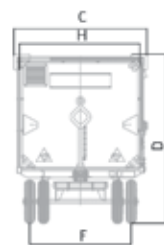




TIPS BAGGAGE TRAILERS	CARGO1712B	CARGO1713B	CARGO1810B	CARGO2515B	CARGO2710B	CARGO3013B	CARGO1911S	CARGO1911V	CARGO2014V
<b>Technical data</b>									
A - Length (mm)	3.159	2.840	2.784	4.071	3.685	4.265	3.166	3.166	3.600
B - Length (raised towbar) (mm)	2.488	2.168	2.113	3.460	3.013	3.580	2.410	2.410	2.844
C - Width (mm)	1.340	1.350	1.006	1.592	1.006	1.592	1.259	1.259	1.550
D1 - Height overall (mm)	1.700	1.365	1.430	1.340	1.430	1.688	/	/	/
D - Height (without cover) (mm)	1.419	1.355	1.420	1.350	1.420	1.424	1.599	1.599	2.320
E - Wheelbase (mm)	1.235	1.201	1.190	1.650	2.090	1.950	1.250	1.250	2.008
F - Wheel track (mm)	1.067	880	870/590	1.314	870/590	1.317	965	965	1.218
G - Loading area length (mm)	1.742	1.700	1.800	2.500	2.700	3.000	1.932	1.932	2.000
H - Loading area width (mm)	1.246	1.250	1.000	1.500	1.000	1.350	1.115	1.115	1.400
Loading surface (m <sup>2</sup> )	2	2	2	4	3	4	2	2	2,8
Cargo capacity (kg)	1.500	900	1.000	1.600	1.500	2.000	1.000	1.000	2.000
Weight nett (kg)	333	220	160	420	185	408	300	360	512
Turning circle (mm)	6.000	6.000	6.000	6.000	6.400	6.400	6.200	6.200	6.200
Technical code	PV-2.1	PV-1.7	GPW1800	PV-2.5	GPW2700	PV-3.0	ST5203		FT2000
Tow speed (km/h)	25	25	25	25	25	25	25	25	25



CARGO2766F

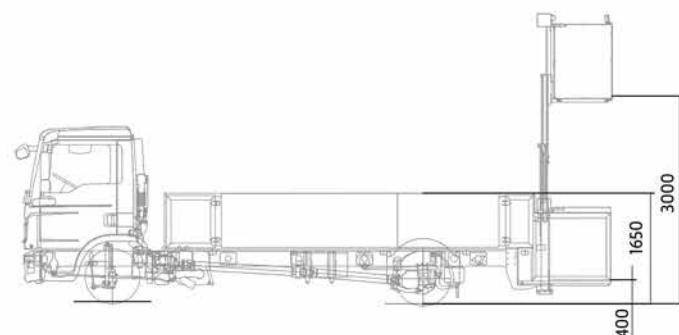
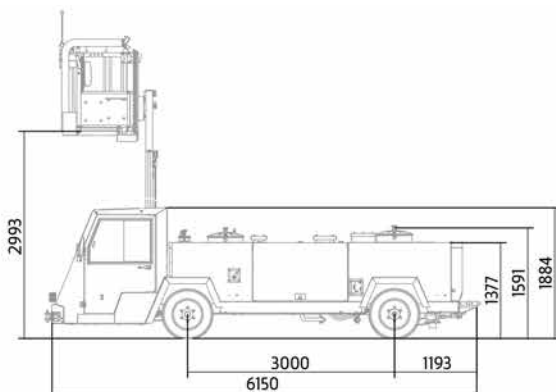


CARGO1911S  
CARGO1911V  
CARGO2014V

## TECHNICAL DATA

TIPS LAVATORY VEHICLES	TANK1212Lf	TANK0505Lr	TANK1022Lr	TANK1734Lr
<b>Technical data</b>				
<b>Chassis</b>				
Length (mm)	6.150			
Width (mm)	2.492			
Height (mm)	1.345	Depends on the chassis		
Wheelbase (mm)	3.001			
Track (mm)	1.858			
Body height, max. (mm)	2.040		1.650	
Weight /Permissible total weight (kg)	4.210 / -	3.500	8.000	12.000
Turning circle (wall-wall) (mm)	12.000			
Engine	DEUTZ diesel			
Hydraulic oil tank (l)	70	Depends on the chassis		
Fuel tank (l)	50			
Driving speed (km/h)	25			
<b>Platform, Stairs</b>				
Platform load capacity (kg)	120	Not available	200	
Platform lift height (m)	3	Not available	3	3
Nr. of steps	Not available		2 - 3	
<b>Tank, pumps</b>				
Wastewater tank (l)	1.200	500	1.000-2.200	1.750-3.400
Rinse tank (l)	700	170	480-1.550	640-2.500
Disinfectant tank (l)	100	80	50-260	100-400
Disinfectant mixture (%)	0-10, adjustable, option		0-10, adjustable, option	
Glycol mixture (%)	Not available		0-10, adjustable, option	
Water pump pressure (bar)	up to 4		up to 4, adjustable	
Water pump flow rate (l/min)	80		80	
Vacuum pump flow rate (m <sup>3</sup> /h)	200	250	490	490
Waste tank drainage	NW 100, manually operated		NW 100-150, manually operated - actuated	
<b>Other</b>				
Electric system (V/Ah)	24/150		Depends on the chassis	

TIPS POTABLE WATER VEHICLES	TANK1215Pf	TANK0707Pr	TANK0610Pr	TANK1027Pr	TANK2740Pr
<b>Technical data</b>					
<b>Chassis</b>					
Length (mm)	6.150	3.860			
Width (mm)	2.492	1.755			
Height (mm)	1.345	1.230	Depends on the chassis		
Wheelbase (mm)	3.001	2.025			
Track (mm)	1.858	1.560			
Body height, max. (mm)	2.040	1.930, cabin		1.650	
Weight / Permissible total weight (kg)	4.210	3.300	3.500	8.000	12.000
Turning circle (wall-wall) (mm)	12.000				
Engine	DEUTZ diesel				
Hydraulic oil tank (l)	70	17	Depends on the chassis		
Fuel tank (l)	50				
Driving speed (km/h)	25	25			
<b>Platform, Stairs</b>					
Platform load capacity (kg)	120	Not available		200	
Platform lift height (m)	3	Not available		3	
Nr. of steps	Not available	2-3			
<b>Tank, Pumps</b>					
Potable water tank (l)	1.200-1.500	700	600 - 1.000	1.000 - 2.700	2.700 - 4.000
Waste water tank (l)	500, option		50	500	Not available
Water pump pressure (bar)	2-4, switchable		2-4, switchable		
Water pump flow rate (l/min)	80		80	100	
Waste tank drainage	2", ball valve, manually operated		3" ball valve, pneumatically operated - actuated		
<b>Other</b>					
Electric system (V/Ah)	24/150	80/300	Depends on the chassis		

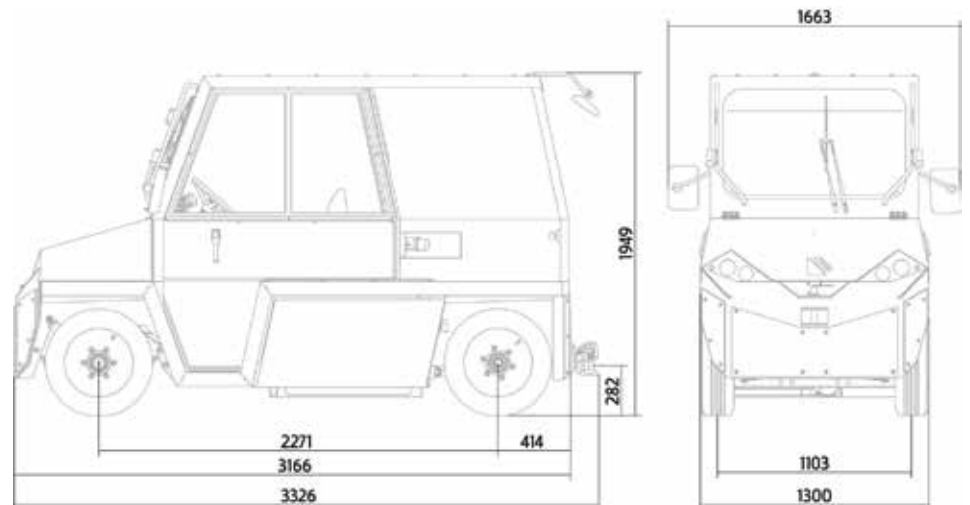
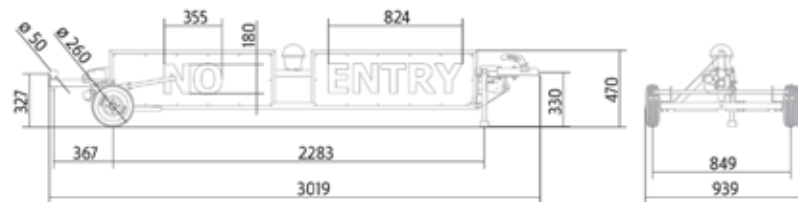


**TIPS TRACTOR****THRUSTER3025Ce****Technical data**

Length (mm)	3.326
Width (mm)	1.300
Height (mm)	2.000
Wheelbase (mm)	2.250
Track (mm)	1.103
Ground clearance (mm)	130
Turning circle (wall-wall) (mm)	8.500
Coupling height (mm)	280
Loading are (mm)	900 x 900
Weight (kg)	1.750
Battery weight (kg)	1.300
Electric system (V/Ah)	80/450
Rated drawbar pull (N)	8.000
Max. drawbar pull (N)	17.000
Towing capacity (industrial application) (kg)	20.000
Towing capacity (airports) (kg)	8.600
Max. travel speed (with 20.000kg) (km/h)	10
Max. travel speed (with 8600kg) (km/h)	15
Max. travel speed (without load) (km/h)	25
Gradeability (with 20.000kg) (%)	4
Gradeability (with 8.600kg) (%)	9
Gradeability (without load) (%)	32

**TIPS  
NO ENTRY  
TRAILER****NO ENTRY****Technical data**

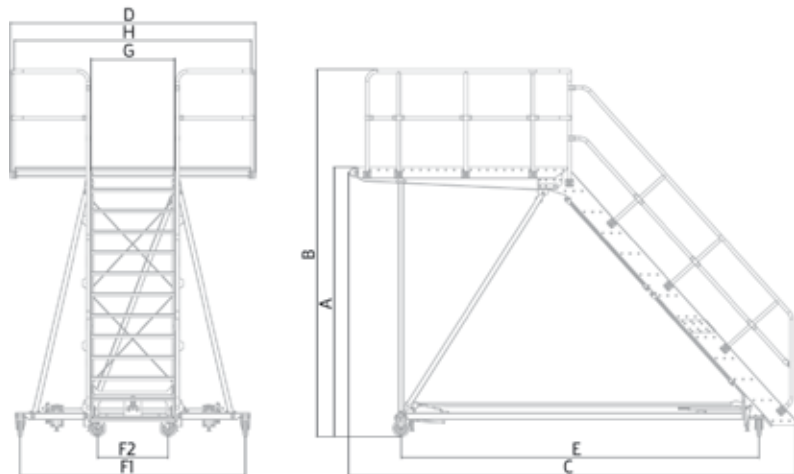
Overall length (mm)	3.019
Overall width (mm)	939
Overall height (mm)	480
Size of panels (mm)	1.040 x 280
Wheelbase (mm)	849
Coupling height (mm)	330
Nett weight (kg)	60
Max. towing speed (km/h)	25



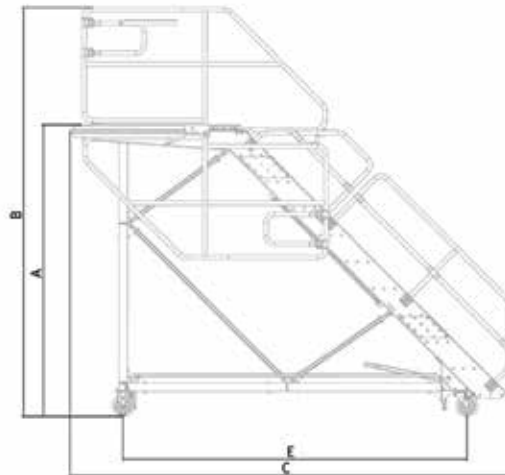
TIPS WORKING AND STORAGE STAIRS	Platform height	Platform size (Width x length)		Operation		All possible version
		Working stairs: 1000 x 1200 mm	Storage stairs: 2800 x 2500 mm	Manual	Tow bar	
DOCK	1250	W		/	t	<b>DOCK1250W / Wt</b>
	1500	W		/	t	<b>DOCK1500W / Wt</b>
	1750	W		/	t	<b>DOCK1750W / Wt</b>
	2000	W		/	t	<b>DOCK2000W / Wt</b>
	2250	W		/	t	<b>DOCK2250W / Wt</b>
	2500	W		/	t	<b>DOCK2500W / Wt</b>
	2750	W	S	/	t	<b>DOCK2750W / Wt / S / St</b>
	3000	W	S	/	t	<b>DOCK3000W / Wt / S / St</b>
	3250	W	S	/	t	<b>DOCK3250W / Wt / S / St</b>
	3500	W	S	/	t	<b>DOCK3500W / Wt / S / St</b>
	3750	W	S	/	t	<b>DOCK3750W / Wt / S / St</b>
	4000	W	S	/	t	<b>DOCK4000W / Wt / S / St</b>
	4250	W		/	t	<b>DOCK4250W / Wt</b>
	4500	W		/	t	<b>DOCK4500W / Wt</b>
	4750	W		/	t	<b>DOCK4750W / Wt</b>
	5000	W		/	t	<b>DOCK5000W / Wt</b>
	5250	W		/	t	<b>DOCK5250W / Wt</b>
5500	W		/	t	<b>DOCK5500W / Wt</b>	

## TECHNICAL DATA

<b>TIPS WORKING AND STORAGE STAIRS</b>	DOCK1250W	DOCK1500W	DOCK1750W	DOCK2000W	DOCK2250W	DOCK2500W	DOCK2750W	DOCK3000W	DOCK3250W	DOCK3500W	DOCK3750W			
	<b>Technical data</b>													
	A - Platform height (mm)	1.232	1.482	1.731	1.981	2.230	2.480	2.730	2.980	3.229	3.478	3.728		
	B - Overall height (mm)	2.283	2.533	2.782	3.032	3.282	3.531	3.841	4.031	4.280	4.529	4.779		
	C - Overall length (mm)	2.340	2.590	2.839	3.089	3.338	3.588	3.838	4.087	4.337	4.586	4.836		
	D - Overall width (mm)	1.372						2.000						
	E - Wheelbase (mm)	1.729	1.979	2.228	2.478	2.727	2.977	3.226	3.476	3.726	3.975	4.225		
	F1 - Track front (mm)	1.088						1.888						
	F2 - Track rear (mm)							768						
	G - Internal stairflight width (mm)							800						
	H - Internal platform width (mm)							1.070						
	Possible platform lengths (mm)	1.200	1.200, 1.500							1.200, 1.500, 2.100				
Nr. of steps	5	6	7	8	9	10	11	12	13	14	15			
Step height (mm)							250							
Step depth (mm)							250							
Stairflight inclination							45°							
<b>Load capacity, weight</b>														
Load capacity (kg)							300							
Stairs nett weight (ca.) (kg)	304	329	353	376	398	419	523	550	576	601	625			
<b>Velocity</b>														
Max. towing speed speed (km/h)	15	15	15	15	15	15	15	15	15	15	15			



DOCK4000W							DOCK4250W							DOCK4500W							DOCK4750W							DOCK5000W							DOCK5250W							DOCK5500W							DOCK2750S							DOCK3000S							DOCK3250S							DOCK3500S							DOCK3750S							DOCK4000S																			
3.978	4.227	4.477	4.726	4.976	5.226	5.475	2.718	2.968	3.218	3.468	3.718	3.968	5.029	5.278	5.528	5.777	6.027	6.277	6.526	3.888	4.138	4.388	4.638	4.888	5.138	5.086	5.335	5.585	5.834	6.084	6.334	6.583	4.895	5.120	5.345	5.570	5.795	6.020	2.800	2.950	4.475	4.724	4.974	5.223	5.473	5.723	5.972	3.825	4.050	4.275	4.500	4.725	4.950	2.688	2.685	845	1.000	2.800	2.500	16	17	18	19	20	21	22	11	12	13	14	15	16	250	225	48°	600	648	802	831	859	886	912	937	607	634	660	685	709	732	15	15	15	15	15	15	15	15	15	15	15	15	15	15





- A** Aalborg Lufthavn A.m.b.a. (DNK)  
 Abuja International Airport (NGR)  
 Aerodrom Ljubljana (SVN)  
 Aeroflot (RUS)  
 AeroGround Munich Airport (DEU)  
 AirAsia (THA)  
 Airbus Defence and Space Germany GmbH (DEU)  
 Airbus Operations GmbH (DEU)  
 Aircargo Logistic France (FRA)  
 Airport Nuremberg ( DEU)  
 Alborg Airport (DNK)  
 Almaty Airport (KAZ)  
 ANA - All Nippon Airways (JPN)  
 Ängelholm Airport (SWE)  
 Aomori Airport (JPN)  
 Ashgabat Airport (TKM)  
 Atlantic Airways (FRO)  
 Aviapartner (BEL)  
 Avinor AS (NOR)
- B** Baden Airpark (DEU)  
 Banja Luka International Airport (BIH)  
 Belgrade Nikola Tesla Airport (SRB)  
 Bergen Airport (NOR)  
 Billund Airport (DNK)  
 Boryspil International Airport (UKR)  
 Bremen Airport (DEU)
- C** Cargologic (CHE)  
 Cavag (RUS)  
 Copenhagen Airports (DNK)
- D** Daiichi Jitsugyo (JNP)  
 Dubrovnik Airport (HRV)  
 Dushanbe International Airport (TJK)  
 Düsseldorf International Airport (DEU)
- F** Finnair (FIN)  
 Frankfurt-Hahn Airport (DEU)  
 Fraport (DEU)  
 Friedrichshafen Airport (DEU)
- Fukuoka Airport (JPN)
- G** Globe Ground Berlin (DEU)  
 Graz Airport (AUT)
- H** HAG Nagoya Airport (JPN)  
 Hamburg Airport (DEU)  
 Haneda Airport (HND)  
 HiServ GmbH & Co.KG (DEU)  
 HTS - Haneda Turtle Service (JPN)
- I** Innsbruck Airport (AUT)  
 Investment&Trading Service AG (CHE)
- J** JAL - Japan Airlines (JPN)  
 Jet Aviation (CHE)
- K** Kaliningrad International Airport (Khabrovo) (RUS)  
 Kalmar Öland Airport AB (SWE)  
 Kansai Airport (JPN)  
 Kiruna Airport (SWE)  
 Klagenfurt Airport (AUT)  
 KLM (NLD)  
 Koltsovo Airport (RUS)  
 Komatsu Airport (JPN)  
 Kristiansund Lufthavn (NOR)  
 Kuhshiro Airport (JPN)
- L** Leipzig Halle Airport (DEU)  
 Linz Airport (AUT)  
 Ljubljana Airport - Fraport Slovenija (SVN)  
 Lulea Airport (SWE)  
 Luxair (LUX)
- M** Manas International Airport (KGZ)  
 Maribor Airport (SVN)  
 Menzies Aviation PLC (GBR)  
 Miho-Yonago Airport (JPN)  
 Moscow Domodedovo Airport (RUS)
- N** Nagoya Airport (JPN)  
 Naha Airport (JPN)  
 Narita International Airport (JPN)  
 New Chitose Airport (JPN)  
 Nice Airport (FRA)
- Norilsk Alykel Airport (RUS)  
 Nursultan Nazarbayev International Airport (KAZ)
- O** Osaka International Airport (Itami Airport) (JPN)  
 Oslo Gardermoen Airport (NOR)
- P** Paderborn Airport (DEU)  
 Podgorica Airport (MNE)  
 Prishtina International Airport (XKX)  
 Pula Airport (HRV)  
 Pulkovo Airport (RUS)
- R** Roshchino International Airport (RUS)  
 Roskilde Lufthavn (DNK)
- S** Salzburg Airport (AUT)  
 Sarajevo International Airport (BIH)  
 SAS - Scandinavian Airlines (SWE)  
 Schiphol Airport (NLD)  
 Sheremetyevo International Airport (RUS)  
 Split Airport (HRV)  
 Stockholm Arlanda (ARN)  
 Stuttgart Airport (DEU)  
 Sultanate Of Oman, Ministry Of Defense (OMN)  
 Swedavia AB (SWE)  
 Swissair (CHE)  
 Swissport (CHE)  
 Swissport The Netherlands (NLD)
- T** TCR GSE (BEL)  
 Tiroler Flughafenbetriebsgesellschaft m.b.H (AUT)  
 Tivat Airport (MNE)  
 Turkmenistan Airlines (TKM)
- U** U.S. Air Force - Ramstein Air Base (DEU)
- V** Vagar Airport (FRO)  
 Vienna International Airport (AUT)  
 Vnukovo International Airport (RUS)
- W** Wideroe (NOR)  
 WISAG Ramp Service Berlin-Brandenburg (DEU)
- Z** Zadar Airport (HRV)  
 Zagreb International Airport (HRV)

©TIPS d.o.o., 2019

All rights reserved.

Any reprinting or unauthorized use without the written permission of Tips d.o.o. is expressly prohibited.

Specifications and appearance of Tips products shown in this catalog may vary according to requirements and conditions, and are subject to change without notice. For further details, please consult your Tips dealer.

