



**CTM
PIONIER**



EXPLORATION



TRANSPORT



CONSTRUCTION



RESCUE

Amphibious heavy cargo transporter
For rough terrain and extreme climates



**CTM
PIONIER**



CREATIVE TRUCK MANUFACTURING made in Germany



CTM – the name says it all: We have been designing, constructing and manufacturing unique special purpose vehicles that are capable of operating in the most extreme conditions on an everyday basis for over 20 years. With a total of 60 highly-qualified members of staff based in two locations in the centre and suburbs of Berlin, we can provide our customers with thorough and informative advice at all stages of the process, from an initial idea, to planning and manufacture, right up to use. We also take care of maintenance, repair and servicing.



Location CTM Berlin



We work with prestigious partners, including Bosch, Palfinger, Volvo and Caterpillar, for our vehicle components. Our customers include vehicle manufacturers, such as Mercedes-Benz, MAN, IVECO, Volvo and Scania, as well as companies, authorities and municipal enterprises in Germany, Eastern and Western Europe, North Africa, Asia and Australia. We have already manufactured 6.500 vehicle bodies for 750 different clients based in 12 countries.

The PIONIER is the product of many conversations with our customers who want an all-terrain heavy cargo transporter for specialised tasks that is even more versatile and offers even better performance than the vehicles already available on the market. CTM is obtaining components for the PIONIER from European partners, equipping it with modern drive technology and marketing the vehicle all over the world.

PIONIER gets to places no other vehicle can

Exploration and exploiting raw materials and natural resources means: Accessing areas that are difficult to reach, that often very few people have ever been to before, let alone in a vehicle. Vegetation, water, wetlands, ice and snow, crevices, inclines... and even in extreme weather conditions. Finding routes, transporting people and provisions, as well as materials, machines and equipment.

The PIONIER is THE vehicle that can cope with these massive challenges. The PIONIER can cross almost all ground, as well as water

and wetlands, scale mountains and inclines, overcome obstacles and even transport up to 30 tonnes of cargo whilst doing so.

And because the tasks it needs to perform can be very different in each location, the PIONIER can be customised with various basic modules, carrier modules and machine modules. Do you need a structure to use as a sanitary or living unit, electricity generators, assembly cranes or tanks for liquids? Anything is possible.



45 km/h



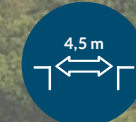
5 km/h



load capacity
30 t



incline
40°



crevice crossing
4,5 m



step crossing
1,8 m



environmental temperature
40 °C / -50 °C



gross vehicle weight
58 t

FEATURES



EXPLORATION

The achievements of history's great explorers and naturalists cannot be estimated highly enough given the level of technical equipment which they had access to. Nowadays, in theory, almost every location on Earth can be accessed very quickly. However, something that still poses a problem is self-sufficient operation in the target area, i.e. exploring and working in a location that is far from roads, ports and landing sites.

Whether you are searching for natural resources or exploring for scientific purposes: The PIONIER is not only capable of reaching locations that are difficult to access, but also, thanks to its massive load capacity, ensures that people have sufficient materials to work independently in the location for a long time and achieve their targets. Whether you add a habitation module, water and provisions, electricity generator or laboratory facilities, you can always carry the required infrastructure with you in the PIONIER.



TRANSPORT

There are a number of vehicles available for transporting heavy cargo from A to B. However, if there are no roads between A and B and you need to cross difficult terrain, perhaps even in extreme weather conditions, then there is no other vehicle currently available that can actually get from A to B.

The PIONIER succeeds where others fail. Thanks to its modular concept, you have the option of deciding what you want to transport. With structures that comply with ISO container standards, the PIONIER can even be integrated into international transportation chains and take cargo on board directly from ships, trains or lorries. If building sites or base camps have already been established in the location, the PIONIER even makes it easy to bring supplies in regularly and transport natural resources, waste or residual material away from the site.



CONSTRUCTION

Infrastructure projects are often started in locations where there is currently no infrastructure. Many such projects fail because of the difficult environmental conditions in the location, which make it either impossible, or at least not economically feasible, to complete the project.

Drilling rigs, pipelines, railway lines, routes and bank stabilisation: The PIONIER does not just transport people and materials to the area of activity, but also helps to complete tasks once it has reached the site. Thanks to its unique traction capacity, the PIONIER can cope with everything, from erecting a base camp for building construction, civil engineering and hydraulic engineering projects right up to installing technical equipment. Due to the diverse range of machine modules available, it can be adapted to your precise requirements.



RESCUE

As a consequence of climate change, the number of natural disasters occurring has doubled over the past twenty years. As well as geological events, such as earthquakes and tsunamis, it is increasingly common for extreme weather conditions to lead to hurricanes, flooding, avalanches and mudslides, which cause significant damage and destroy large areas of infrastructure.

With its huge load capacity and practically unlimited mobility on land and water, the PIONIER is the ideal vehicle for use in disaster zones. It can be used to transport rescue workers to the affected areas, quickly bring in medication, drinking water and food supplies, as well as to secure electricity supplies and accommodation. In salvage and rescue operations, it can also provide support in reinstating infrastructure.



MODULES



Container van



Material and supply van



Timber harvester



Digger



Tipper truck/grader



Concrete mixing pump



Fire brigade



Assembly crane



Manned working platform



Tanker



People carrier

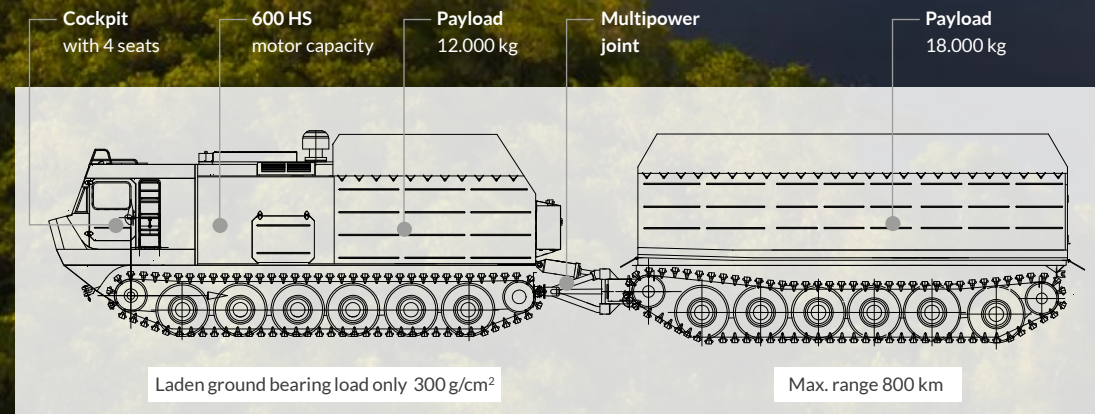
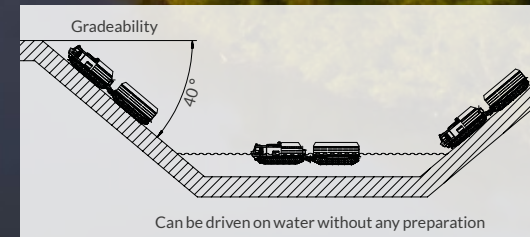
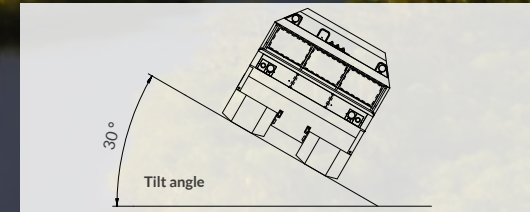


Vehicle towing/
salvage

Unique versatility. Limitless flexibility.

The PIONIER can access almost all locations and, thanks to its modular concept, there are hardly any limits to its uses once it has reached the location in question. Using the relevant structures, it can be transformed into a tanker, mobile home, transporter or construction machine. Or you can change up its function every day.

You get to decide. As the structures can even be built to order, you can change them around as much as required at the site. That's as flexible as it gets.



Tried-and-tested technology combined with an innovative solution.

You don't always need to reinvent the wheel, but you can use it in various ways. This was the concept behind designing the PIONIER. Similar vehicles have proven their reliability over a number of years in the most chal-

lenging conditions. It was time to take the next step and bring a product to the market featuring modern technology, adaptability for various uses and suitability for the most challenging conditions.

TECHNICAL VEHICLE DATA

	PI18 5860	PI18 3660		PI18 5860	PI18 3660
Engine	CAT C18 six-cylinder four-stroke diesel		Maximum speed in water	5 km/h	
Performance	589 bhp / 439 kW / 597 HS		Structural space of first section	3.720 x 2.980 mm (l x w)	2.450 x 2.750 mm (l x w)
Torque value at rated speed	2.627 Nm / 1.400 min ⁻¹		Structural space of second section	6.570 x 2.910 mm (l x w)	6.000 x 2.750 mm (l x w)
Gears	Allison 4700SP 7-gear automatic		Trench / crevice crossing	4,5 m	3,5 m
Wheel suspension	12 separately for each section		Step crossing	1,8 m	1,6 m
Electrics	24 V		Max. range	800 km	600 km
Battery capacity	760 Ah		Tilt	+/- 30°	
Tank capacity	Nominal volume 900 / 1.400 l		Gradeability / descent	+/- 40°	
Steering	multi-power articulated steering		Turning radius	16 m	14 m
Brakes	pneumatic drum brakes		Total vehicle measurements	16,10 x 3,10 x 2,80 m (l x w x h)	14,00 x 2,80 x 2,70 m (l x w x h)
Tracks	Rubber with steel reinforcement		Environmental temperature	- 50 degrees Celsius / + 40 degrees Celsius	
Drive type	All chain drive with differential locks		Ground pressure unladen / laden	145 g/cm ² / 300 g/cm ²	
Gross vehicle weight	58.000 kg	36.000 kg	Traversable ground	grass, forest, sand, peat, moor, Marsh, beach, dunes, rocks, scree, gravel, snow, ice	
Load capacity	30.000 kg	10.000 kg	Waters that can be traversed without any preparation	pond, lake, river, river delta, sandbanks, shore, intertidal coasts, ocean, polar sea, shoals, frozen waters	
Maximum speed on land	45 km/h				





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