

User and maintenance manual

SINUS NANO



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1. Vehicle description

1.1 General Description

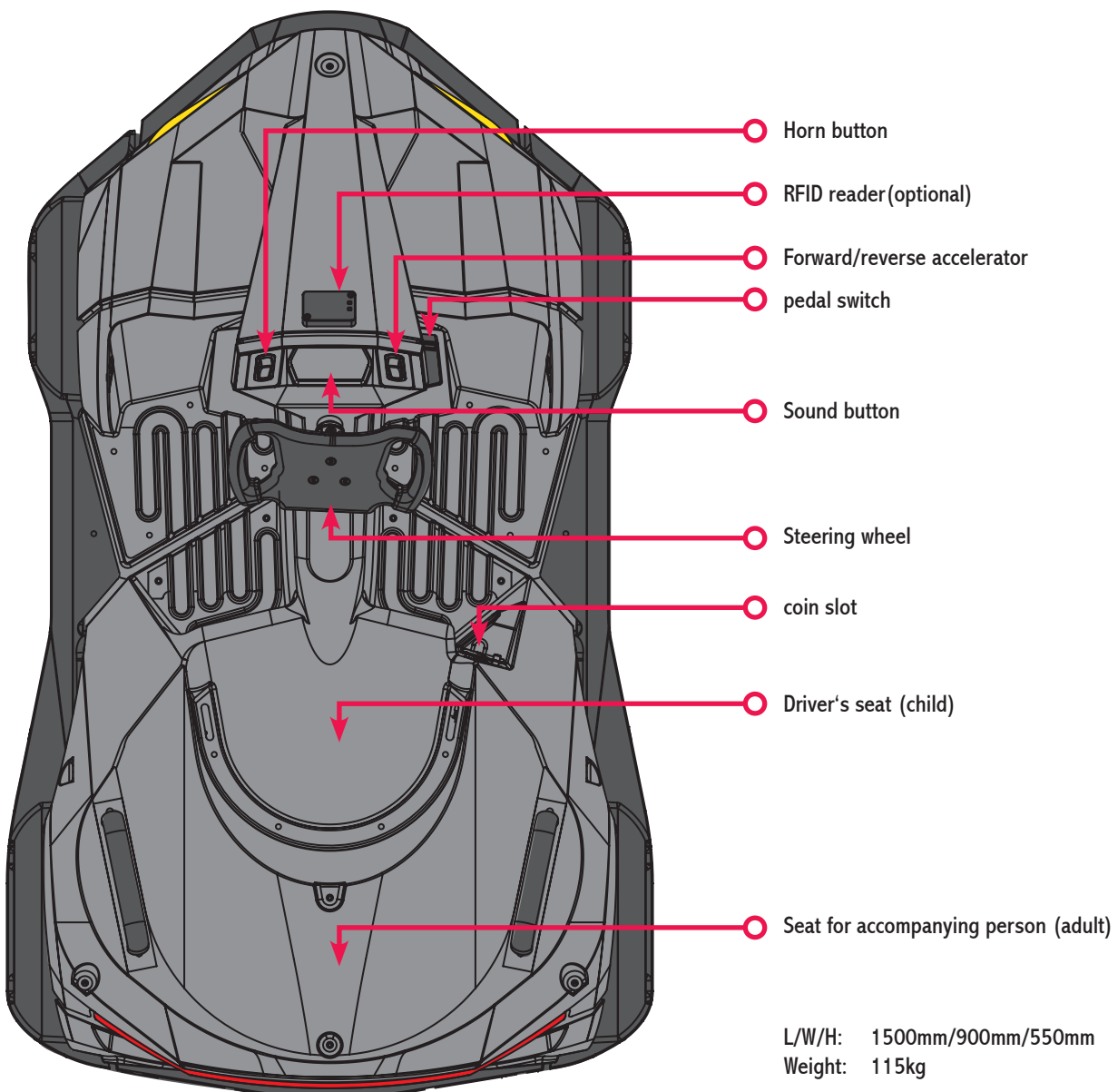
The SiNUS NANO is an electric vehicle designed for independent use by children from the age of around three. In addition, a second young or adult passenger can accompany the ride on an additional seat behind the driver and intervene to correct the steering process if necessary.

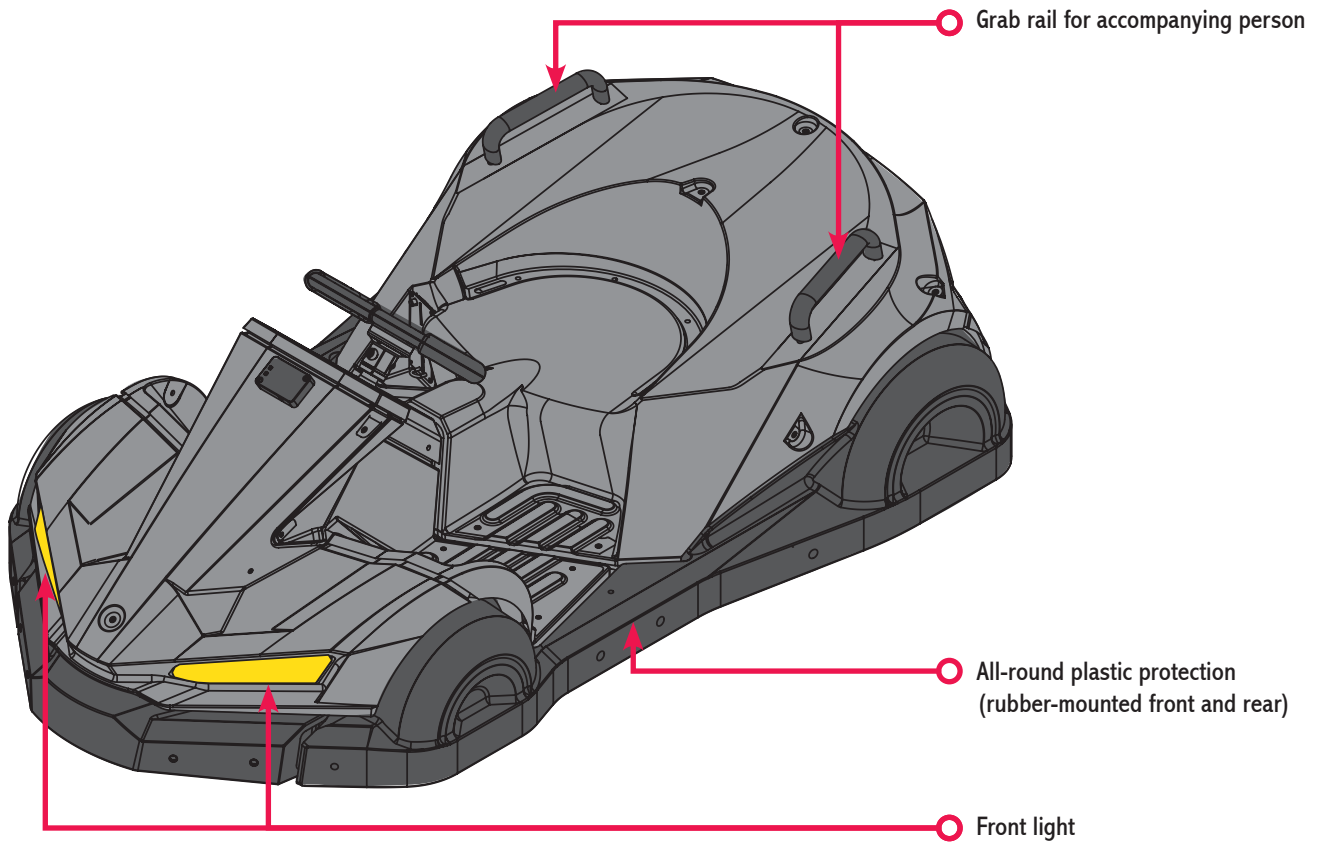
The vehicle must be used for its intended purpose and be in perfect technical condition.

Safety-related faults must be rectified immediately and professionally. The vehicle must not be used until the fault has been rectified.

Please contact the manufacturer for assistance if required.

1.2 Body of the vehicle





1.3 Intended use Use

The SiNUS NANO is designed for use on a flat surface with a suitable surface boundary system and is limited to this. It can be operated by children from the age of around three. The driver must be physically and mentally capable of driving the vehicle safely. The carriageway may only be entered for rapid entry, exit or in an emergency. There is a particular risk of injury in the event of a collision between a moving SiNUS NANO and people on the carriageway.

The information and instructions in this document must be observed in order to use the SiNUS NANO as intended. This also includes regular inspection and maintenance in accordance with the maintenance schedule listed in the manual.

The use of the vehicles is always at your own risk and to the exclusion of any claims for damages.

2. Operating environment

2.1 Flat terrain without incline or gradient

In general, the vehicle is only designed for operation on level ground. Slopes or gradients, whether of natural origin or due to ramp constructions, must be maintained at an incline of less than 5°. In addition, the individual incline sections may only have a maximum length of 10 metres.



Attention

The vehicle has no mechanical brakes.

During driving mode, the vehicle is automatically braked electronically via the motors as long as the accelerator pedal is not depressed. The automatic engine brake is also permanently active in parking mode. As long as pressure is applied to the accelerator pedal, the braking effect is released so that the NANO can be manoeuvred in parking mode. The engine brake is also active when the vehicle is switched off and without a connected battery.

The electronic brake is not a permanent holding brake for inclines. The motor control or the motors can be overloaded and fail. If the vehicle does not stop on a level surface, it may start moving on its own and not be able to brake independently due to the lack of braking effect of the motors.

2.2 Limitation systems

The vehicles may only be operated on a suitable and cordoned-off area.

The boundary system must be designed in such a way that no elements protrude into the carriageway. The side of the barrier facing the vehicle must be aligned perpendicular to the carriageway and consist of a smooth surface. In addition, there must be no sharp or pointed edges at accessible points of the boundary system.

The height of the boundary surface from the top point to the floor must be at least 150 mm.

The boundary system must be designed in such a way that it is impossible to drive through or break through the boundary with the vehicle. Damaged areas must be repaired immediately.

Unhindered evacuation of the route must be guaranteed in the event of an emergency.

2.3 Soil quality

The road surface must be sufficiently solid so that the wheels cannot sink in by more than 1 cm.

Ideal surfaces include roads, asphalt, concrete or tiles. For a good ride comfort, the surface should be as smooth as possible. Although the vehicle has a damped swing axle, which compensates for small bumps for improved steering behaviour, there is no explicit vehicle suspension system installed.

2.4 Environmental requirements

Operating temperature [°C]	+5 bis +45
Storage temperature [°C]	-10 bis +50
Relative humidity during operation [%]	10 % bis 90 % (non-condensing)
Relative humidity for storage [%]	10 % bis 90 % (non-condensing)
Air pressure [hPa]	700 bis 1060

3. Requirements for drivers

The operator must inform parents or guardians of the requirements that apply to the operation of the SiNUS NANO. These relate to their age, height and weight, clothing and any medical restrictions.

3.1 Clothing

Clothing should be tight and close-fitting so that it cannot catch on anything. Long hair must be tied into at least a short plait. Wear closed, flat shoes to avoid slipping off the accelerator pedal or twisting your ankle when getting on and off.

3.2 Physical condition

The physical condition of the users must not be restricted by:

- Insufficient height or strength to safely operate the steering and pedals of the kart and to stay on the vehicle when cornering.
- Health problems (e.g. circulatory problems or mental deficits)
- Excessive use of medication, intoxicants or conspicuous behaviour.

A teenager or adult can accompany the ride on the rear seat provided for this purpose and intervene in the steering if necessary.

4. Load limits of the vehicle

4.1 Payload

The SiNUS NANO is designed for use by up to two people, a child on the front seat and a teenager or adult on the rear seat. The maximum load for the two people must not exceed 150 kg. The transport of objects is not permitted.

4.2 Engine Overload

No objects may be pushed, pulled or transported with the vehicle. If the SiNUS NANO is blocked by an obstacle, the vehicle must be released manually. Attempting to free the vehicle by constantly accelerating can overload and possibly damage the motors and electronics.



Attention

When freeing the kart manually, make sure that you protect yourself from other vehicles that may be travelling on the track. Also make sure that the vehicle to be released cannot injure you, e.g. by accidentally accelerating.

5. Rules of behaviour before and during operation of the vehicle



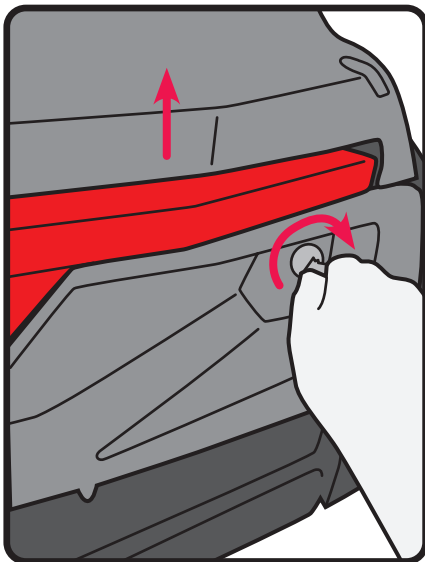
Attention

- The track may only be entered during boarding and alighting or in an emergency.
- The vehicles used must always be driven in the same direction; turning of the vehicle must be prevented.
- Intentional collisions must be prevented.
- If a child is unable to follow the instructions of the staff or the rules of the establishment, the child may only ride if accompanied by a responsible accompanying person.
- When entering and exiting the vehicle, always watch out for other vehicles and, if necessary, ask them to stop briefly so that you can enter and exit the route safely.
- If necessary, instruct all vehicles to stop immediately.

6. Activate vehicle

If the points listed above are understood and fulfilled, and the vehicle is in perfect technical condition, it can be activated.

To do this, proceed as follows:



Open the rear cover:

Turn the key to the right until you hear a „click“.

If the lock is stiff, light pressure on the rear cover can help to relieve the lock.

The rear cover can then be easily lifted upwards. It does not lock in the open position.

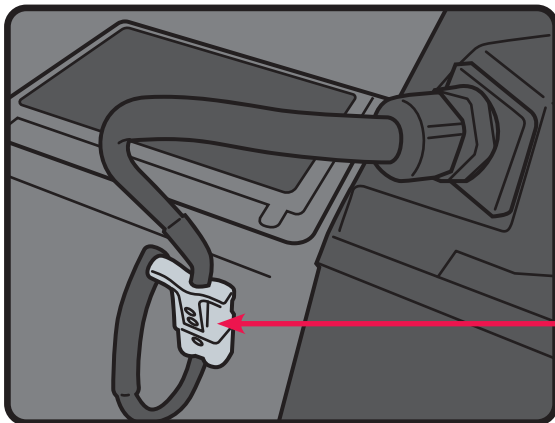


Each vehicle has its own key, so the keys must be clearly assigned to the vehicles and kept in a safe place.
The keys must be kept out of the reach of unauthorised persons.



Attention

When opening or closing the rear cover, there is a risk of crushing, especially for the hands! Ensure that no limbs are in the closing area of the cover! The rear cover may only be opened by trained personnel!



To commission the SiNUS NANO, connect the battery connector to the counterpart installed in the SiNUS NANO.

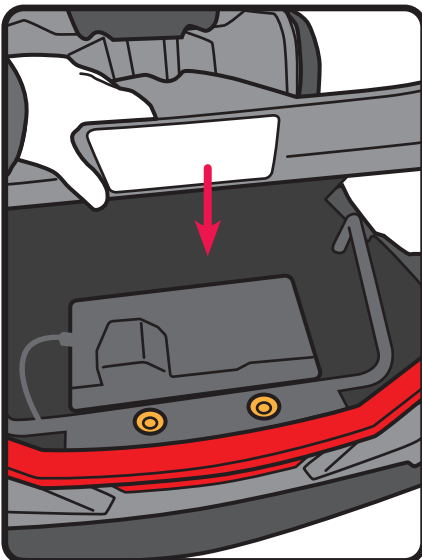
To charge the battery, disconnect the connecting plug of the battery from the counterpart installed in the SiNUS NANO and connect it to the plug of the charger.

Once charging is complete, reconnect the battery to the vehicle plug.

Connector plug



Ensure that the plug is always fully inserted. A plug that is not fully inserted can cause damage to the contacts. A twisted plug that is inserted with force can cause damage to the electronics.



Close the rear cover:

Carefully press the rear cover downwards. To complete the closing process, apply a little more pressure to the cover until you hear the lock engage. Lift the rear cover slightly to check that it is really engaged and locked.

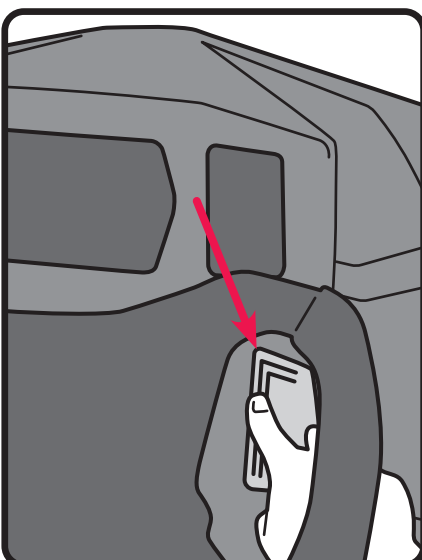


Attention

There is a risk of crushing when opening or closing the rear cover! Ensure that no limbs are in the closing area of the cover! The rear cover may only be opened by trained personnel!



Make sure that there are no vehicle supply lines in the closing area of the rear cover!



Switch on the vehicle:

To switch on the SiNUS NANO, press the accelerator pedal for approx. 2 seconds.

The LED lighting switches on.

The electronics start up and are activated after about 5 seconds.



Attention

No one should be in front of or behind the vehicle when it is switched on!

The vehicle is now ready for operation.

The SiNUS NANO can now be initially set and configured using the programming device.

7. Vehicle settings

If the programming device is connected to the control box mounted under the driver's seat, a screen with various menu items opens on the display of the programming device, allowing individual settings to be made on the vehicle.



The programming device enables quick configuration of the SiNUS NANO. It is also an analysis tool and can be used to set, monitor or even start the SiNUS NANO.

If the programming device does not display the expected screen or does not work, try disconnecting it from the vehicle and then reconnecting it.

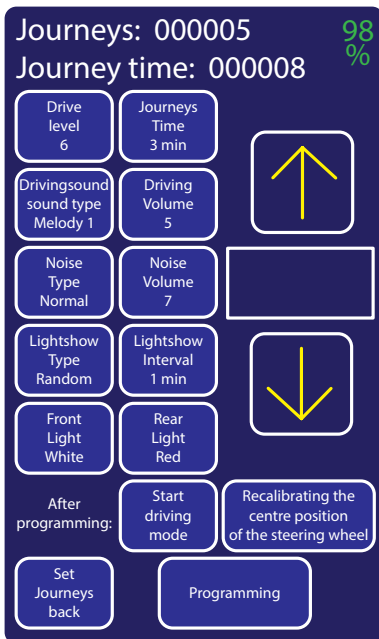


Fig. 1

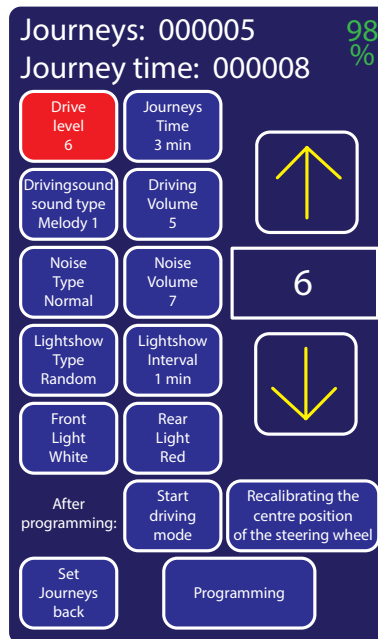


Fig. 2

In addition to the battery charge level in %, the programming device also displays the number of journeys and the total journey time of the SiNUS NANO. The touch points for the setting options are selected by tapping on them (highlighted in colour) and changed using the arrow buttons. The setting is displayed simultaneously in the touch point and in the field between the arrow buttons (Fig. 2).

In detail:

Figure 1 shows the basic view.

The selected touch point is highlighted in red (Fig. 2).

1. Speed level: Specifies the speed level at which the vehicle is started and travelled. (Levels: 1-6).
2. Journey time: Selection of the journey time in minutes. Journey times between 1 and 9 minutes are available, as well as permanent activation without a time limit (Inf.).
3. Driving sound type: Choice between three different engine sounds (Motor 1-3) and five different melodies (Melody 1-5), which are played during the journey. In addition, a random engine sound (Random Mot) or a random melody (Random Mel) can be played each time the driving mode is started.
4. Driving sound volume: Selection of the volume of the engine noise or melody while driving. (levels 0 - 9).
5. Sound type: Switch between two different sound types, which are played at the start or end of driving mode, for example. Selection between normal and childlike.
6. Sound volume: Setting the volume of all sounds generated by the vehicle, except for the engine noise and melody. This includes in particular the horn and the sound generation buttons. (Levels 0 - 9).
7. Light show type: Selection of different light animations for the front and rear LEDs. These animations are played in the parking position when not in use. Selection between: Rainbow, running light, tracking or random.
8. Light show interval: Specifies the interval at which the light shows listed under point 7 are displayed. Selection between Off and 0 - 9 minutes.
9. Front light: Colour selection of the front LED during driving mode. Available colours are: Red, green, blue, yellow, purple, cyan and white.
10. Rear light: Colour selection of the rear LED during driving mode. Available colours are: Red, green, blue, yellow, purple, cyan and white.

Other buttons (Fig. 3) do not offer a permanent setting option, but only allow a one-off triggering.

Start drive mode: When the touch point is activated and then confirmed using the „Programme“ touch point, the drive mode started after removing the programming device from the electronics box.

Reset trips: When activated and then confirmed via the „Programme“ touch point, the temporary trip counter is reset. This function can be used, for example, to check the journeys made since the last coin was emptied. The permanent trip counter cannot be reset. The temporary and permanent trip counters are shown alternately on the display for 5 seconds each.

Recalibrating the centre position of the steering wheel: When activated and then programmed, the steering angle sensor is recalibrated. This may only be carried out by trained personnel, as an incorrect setting has a negative effect on the driving behaviour and can lead to overloading of the motors and motor control. See chapter 13.1 for more detailed information.

Tapping the programming button (Fig. 4) confirms the settings and transfers them to the control unit. At the end of the transfer process, the „Programming“ touch point changes from red to green (Fig. 5).

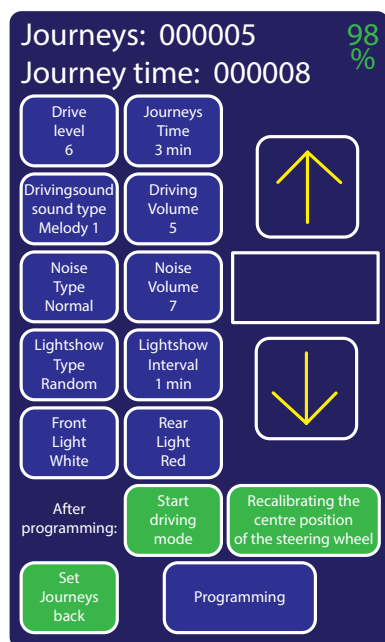


Fig. 3

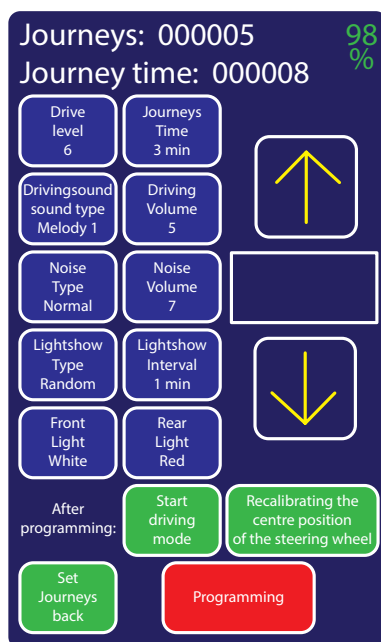


Fig. 4

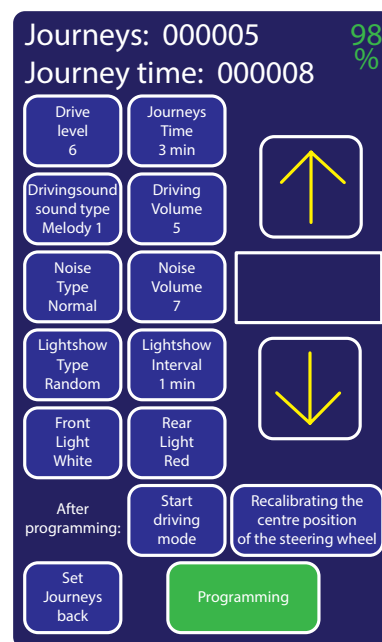


Fig. 5

8. Start vehicle - switch to driving mode

The following options are available to start the SiNUS Nano:

- Start via coin slot
- Start via the programming device
- Start via RFID card

Start via coin slot:

This is done by inserting a coin into the coin tester. The programmed journey time starts and the vehicle can be set in motion by pressing the accelerator pedal. 2 coins and tokens provided by RiMO are accepted ex works. RiMO can also programme the coin tester to accept other coins on request.

Start via the programming device:

By selecting the „Start driving mode“ button and then pressing the „Programme“ button, the start command is sent to the vehicle. Driving mode starts as soon as the programming device is disconnected from the vehicle.

Start via RFID card:

The vehicle can also be started by briefly inserting a previously programmed RFID card. Depending on the mode programmed on the card, various operating options are available.



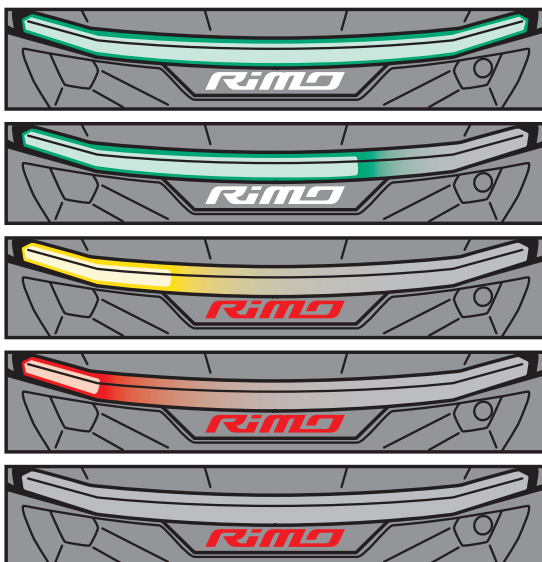
Attention

No person may be in front of or behind the vehicle when it is being started.

9. Switch off the vehicle

The vehicle is switched off by pressing and holding the horn button for approx. 10 seconds. This is done, for example, to switch off the vehicle overnight, for maintenance work or to charge the battery.

10. Charging process



When the vehicle is switched on, the battery charge status can be read out using the programming device and by simultaneously pressing the horn switch and one of the sound buttons above the steering wheel.

The vehicle must not be in driving mode and no light cycle must be running. The front and rear LEDs of the vehicle light up green when the charge level is above 30%, yellow between 30% and 10% and red when it is below 10%. The rear LEDs also indicate the state of charge as a percentage filling of the continuous upper rear light. As soon as the SOC falls below 30 %, the LEDs of the RiMO logo at the rear light up red continuously to indicate to the operator, even from a distance, that the battery should be recharged. This is done permanently, even without a separate query via the button combination. The rear LED is shown as an example in the following illustrations under different charging conditions.

Battery charge status display via rear LEDs (from top to bottom: 100%, 65%, 25%, 10%, warning even without charge status display)

If the vehicle is not used for a longer period of time or if the battery is at a low charge level, it must be recharged.

The battery is charged as described below:

- Please first read and observe the operating instructions for the charger (included in the scope of delivery)
(If you are unsure how to operate the device, please contact RiMO GERMANY GmbH & Co. KG +49 (0) 23 72 - 5999 500).
- Switch off the vehicle.
- Open the rear cover.
- Disconnect the connector plug from the battery.
- Insert the charging plug of the charger into the battery socket.
- The charger starts the charging process automatically and also ends it automatically as soon as the battery is fully charged.
- Once the charging process is complete, you can disconnect the charging plug from the battery again by carefully pulling it out.

The battery can be charged directly in the vehicle. If necessary, you can also remove the battery from the vehicle for the charging process. This is useful, for example, if an interchangeable battery is present and driving operation is to be maintained without interruption.



Attention

Ensure that the charging process starts properly (see charger operating instructions)



To maintain the performance of the battery for as long as possible, we recommend charging the battery when the SOC is below 50% and the time is available for charging.
Continuously running the battery empty (SOC 0%) will reduce the service life of the battery.



Attention

Only the original SiNUS NANO charger (item no. 1382500) or a charger approved by RiMO GERMANY may be used to charge the battery.

11. Care instructions

To clean the vehicle, you should first remove the coarse dirt and dust with compressed air. Other dirt that cannot be removed with compressed air can then be removed with a damp, lint-free cloth. You can also use a solvent-free cleaning agent should be used. When using cleaning agents, always test the material compatibility on small, non-safety-relevant and not directly visible areas first. If in doubt, contact the manufacturer.



Attention

Wear safety goggles and a face mask!

12. Daily check before commissioning

To ensure safe operation, the points below are part of the daily routine required before the vehicles are put into operation.

- Each vehicle must be checked for external damage and safety-relevant defects must be rectified before it is put into operation.
- Wheels and tyres must be checked for wear and replaced if they are badly worn.
- The charge status of the battery must be checked and recharged if necessary (see section 10).

13. Vehicle storage

If you no longer need the vehicle for a longer period of time and want to store it, you should note the following:

- Clean the vehicle (follow the care instructions).
- Disconnect the battery plug from the battery.
- Fully charge the battery (it should be recharged after 8 months of storage at the latest).
- Store the kart in a safe, dark place and secure it against rolling away.

14. Special components

RFID programmer

Item number 1389451

The RFID cards are programmed accordingly using the RFID programmer.
The switch button allows three settings:

„Child“ (Fig. 1 - switched to the left), „Read“ (switched to the centre) and „Staff“ (Fig. 2 - switched to the right). With the previous switch to the left (child) or right (staff), the RFID card is programmed by placing it on the RFID unit below. The LED labelled RFID lights up green when programming to child and blue when programming to staff. Programming is complete as soon as the RFID LED lights up, which happens immediately after the card is placed on the unit.



The „Read“ switch position in the centre allows you to check which function the card has been programmed for.

The programmed difference between the „Child“ and „Personnel“ cards is:

Child: can start the SiNUS NANO by placing the card on the RFID reader of the kart

Personnel: can start and stop the SiNUS NANO by placing the card on the RFID reader of the cart

The RFID card specification is: Mifare Ultralight EV1



NANO emergency stop

Item number 1389452

The NANO emergency stop transmitter is required to stop all SiNUS NANO vehicles directly if necessary, as well as to switch all vehicles simultaneously to drive mode and back to park mode after driving.

The red round push-button labelled NOT HALT causes the vehicles to stop immediately when the button is pressed without first running through the programmed routine for returning to parking mode (melody playback, warning flashing function).

To release the button again, turn it clockwise.

The blue button on the left labelled „Start all“ switches all SiNUS NANOs to drive mode at the same time, taking the programmed routine into account. This is necessary to start the journey of all vehicles together.

The right-hand blue button labelled „Stop all“ switches all SiNUS NANOs to parking mode at the same time, taking the programmed routine into account. This is necessary to park all vehicles together after the end of the journey.

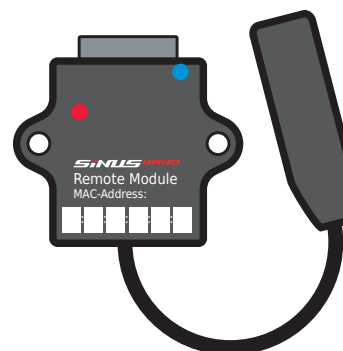


Remote module

The remote module is mounted under the rear cover and is used to receive the emergency stop signal after connection to the electronics box installed there. To programme the kart using the programming device, the plug of the remote module must first be removed from the electronics box. After programming, it must be plugged back into the same input.

LED displays on the module:

- Red LED: Power supply to the module is indicated
- Blue LED: Data transfer is taking place



RFID Reader

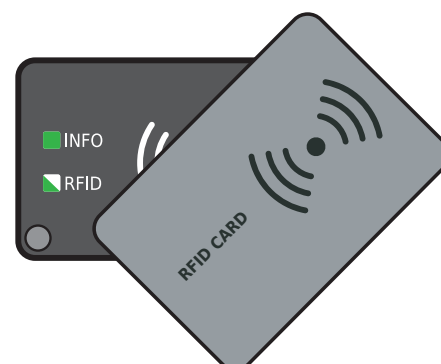
An RFID reader is mounted on the front plate of the SiNUS NANO. The RFID card must be briefly placed on the top of the reader until the reader's LEDs light up.

Depending on the programming of the RFID cards to be inserted, an operating mode is enabled for the vehicle.

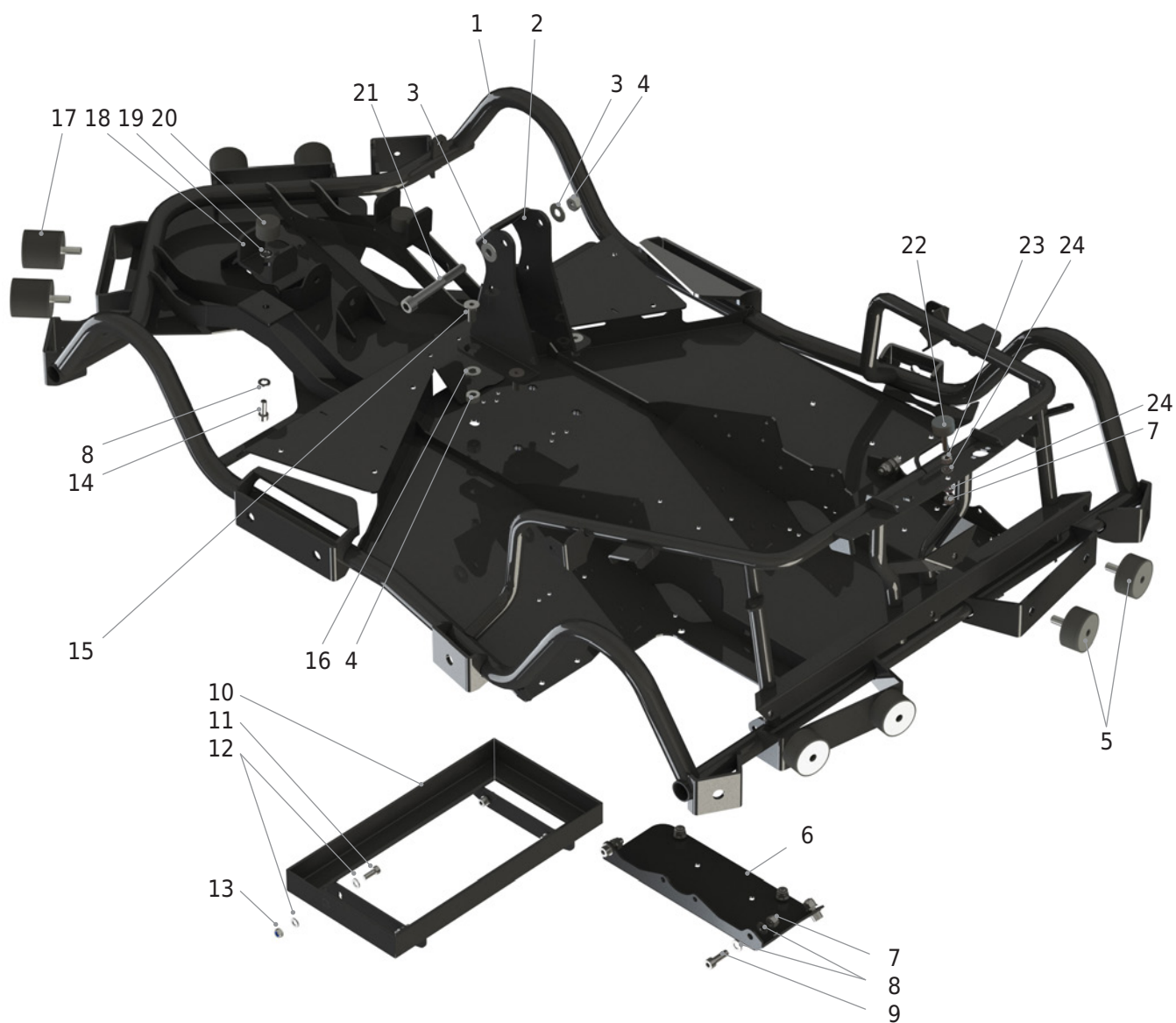
The colour coding of the installed LEDs is the same as for the programming device:

- Green LED: Driving mode child,
- Blue LED: Driving mode personnel.

In Child driving mode, the previously programmed driving time of the SiNUS NANO is started; Personnel mode also allows the vehicle to be reset to parking mode.



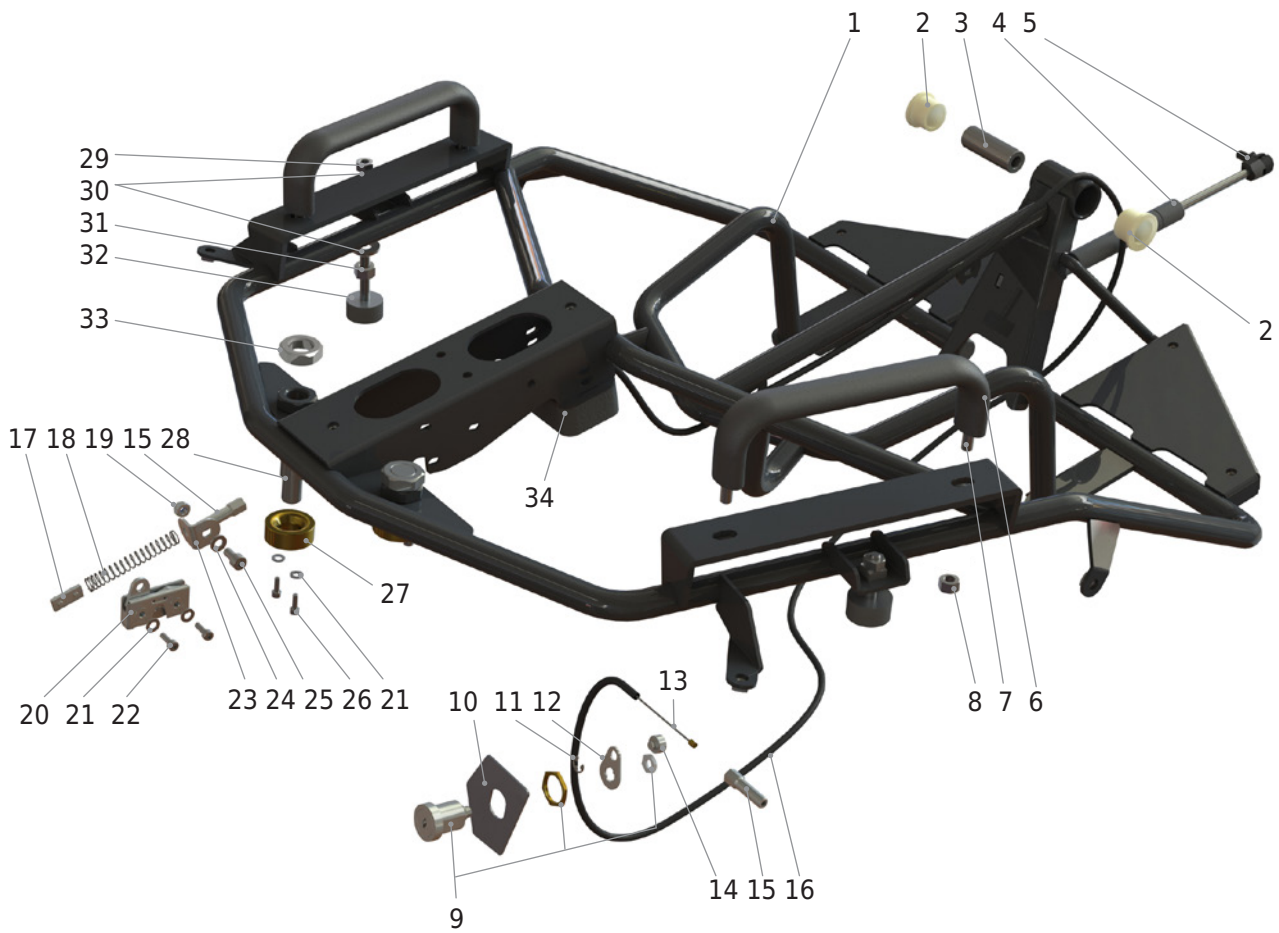
1. main frame assembly



1. main frame assembly

No.	Item no.	Naming
1	4000272	NANO main frame
2	4000149	NANO pivot point folding seat substructure
3	1831057	Washer M10 - 10.5x20x1.8mm galvanised
4	1822002	Hexagon nut M10 galvanised self-locking
5	1384023	Silentblock D=50, L=25 M10 inside/outside, 55 Shore
6	4000369	NANO carrier plate Gear motor
7	1822001	Hexagon nut M8 galvanised self-locking
8	1831020	Washer for M8 8.4x16x1.6 galvanised
9	1816082	Z-ISK screw M6x18 galvanised
10a	4000281	NANO base frame battery holder 36V 30AH
10b	4000282	NANO base frame battery holder 36V 45AH
11	1816082	Z-ISK screw M6x18 galvanised
12	1831011	Washer for M6 6.4x11.77x1.52 galvanised
13	1822012	Hexagon nut M6 galvanised self-locking
14	1816033	Z-ISK screw M8x20 galvanised 8.8
15	1816046	Countersunk screw M10x25 galvanised 10.9
16	1831057	Washer M10 10.5x20x1.8mm galvanised
17	1384007	Silentblock D=50, L=50 M10 inside/outside, 55 shore
18	4000242	NANO mount Buffer guide Swing axle
19	1836004	Shim 8x14x1
20	1384241	Silentblock D=30 H=20 1xM8iG 55Sh (rubber stop)
21	1816060	Z-ISK screw M10x85 galvanised 8.8
22	1384272	Silentblock D=30, L=15 1 side M8x33
23	1822004	Hexagon nut M8 galvanised
24	1831004	Washer for M8 8.4x21x4 galvanised

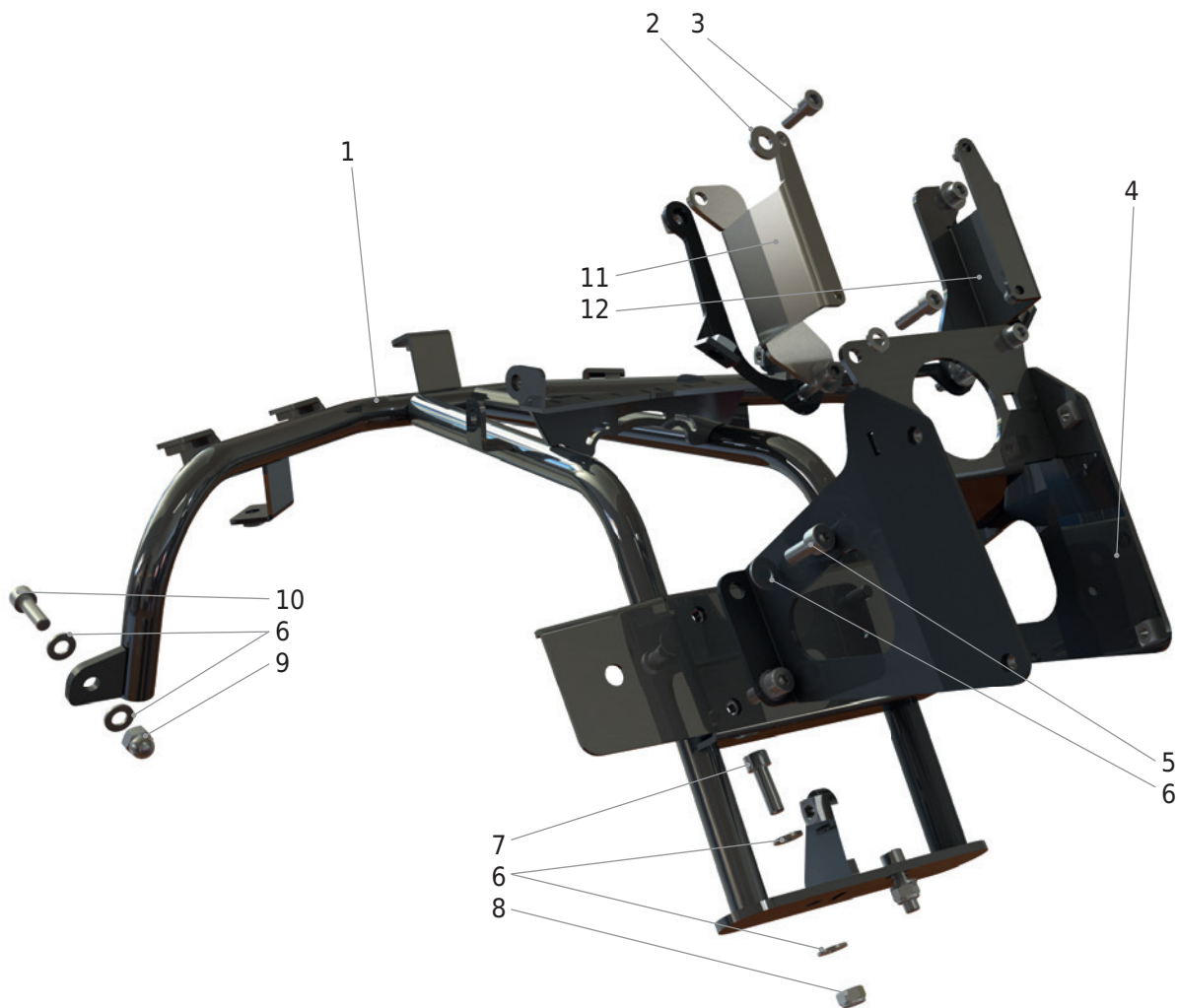
2. Folding seat assembly



2. Folding seat assembly

No.	Item no.	Naming
1	4000274	NANO folding seat substructure
2	1324139	IGUS plain bearing with collar JFM-2026-20
3	4000184	Sleeve pivot point 10x20x57 Folding seat
4	1324145	NANO gas strut
5	1369026	Ball stud for shock absorber
6	1363002	U-handle with blind hole thread M8 black
7	1819034	Grub screw M8x30 DIN 913 galvanised
8	1822036	Hexagon nut M8 with collar self-locking galvanised
9	1389016	NANO cylinder lock folding seat
10	4000293	NANO mounting plate lock rear cover
11	1832006	Lock washer 5mm DIN 6799
12	4000294	NANO lever lock Burg Wächter rear cover
13	1324096	Rope (1mm) for gas with nipple
14	1382113	Galvanised cable guide nipple for throttle cable
15	1383023	Adjusting screw M8 external thread - for rope cover
16	1324035	Cover with Teflon insert for gas
17	1324002	Rope clamp 2mm
18	1891016	Compression spring 9x70 Gas return stainless steel
19	1822012	Hexagon nut M6 galvanised self-locking
20	1389015	Southco lock R4-05-22-505-20
21	1831053	Washer for M4 4.3x12x1 galvanised
22	1816051	Z-ISK screw M4x12 galvanised
23	1387013	Angle 20x20 galvanised 1x90° bent
24	1831030	Washer for M6 6.4x20x1.25 galvanised
25	1816170	Z-ISK screw M6x12 galvanised
26	1816053	Z-ISK screw M4x8 galvanised
27	4000259	NANO folding seat guide bush
28	4000258	NANO folding seat adjustable guide bolt
29	1822001	Hexagon nut M8 galvanised self-locking
30	1831004	Washer for M8 8.4x21x4 galvanised
31	1822004	Hexagon nut M8 galvanised
32	1384272	Silentblock D=30, L=15 1 side M8x33
33	1822079	Hexagon nut M18
34	1367016	Foam buffer

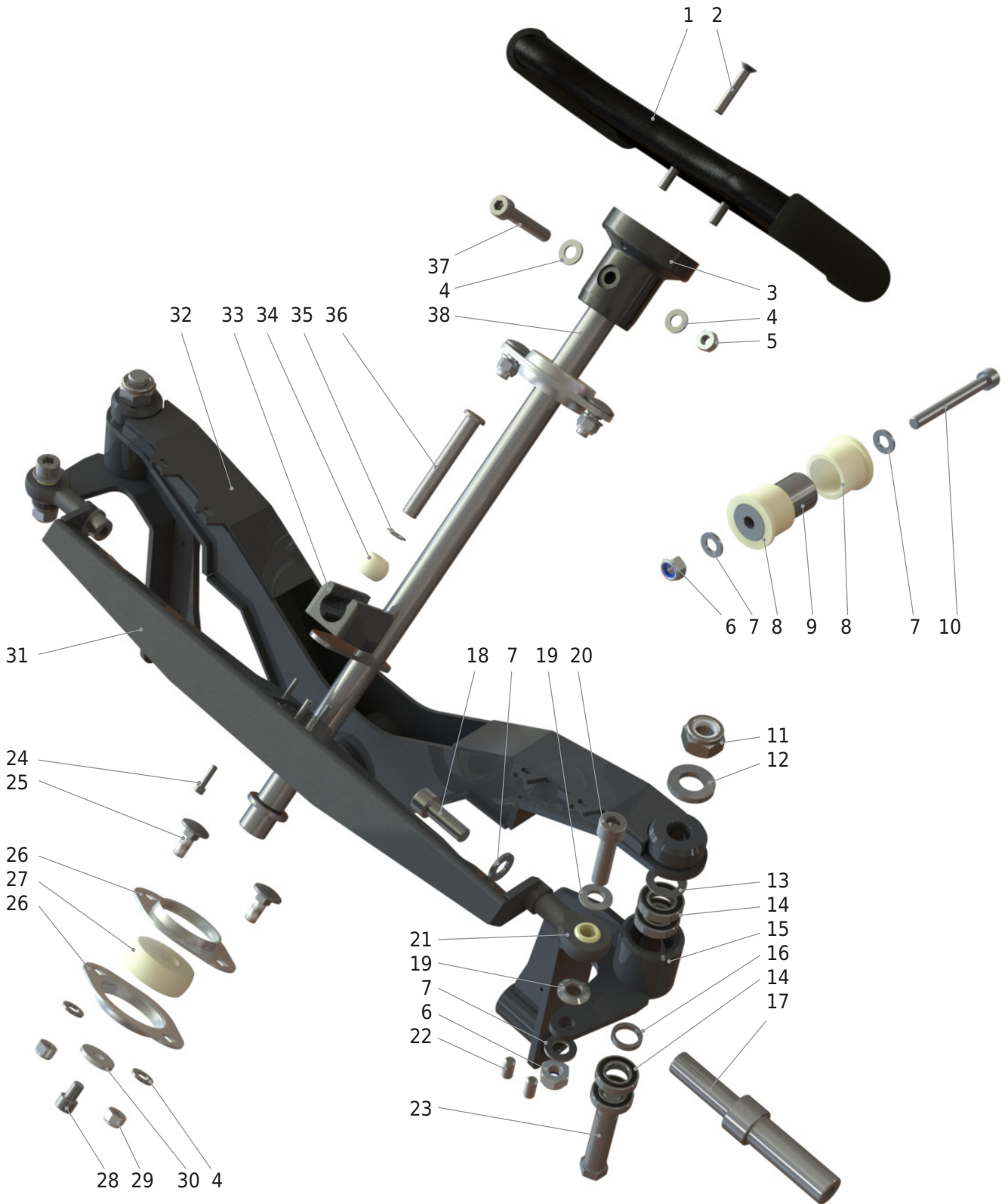
3. console bridge assembly



3. console bridge assembly

No.	Item no.	Naming
1	4000273	NANO console bridge
2	1831056	Washer for M6 galvanised
3	1816028	ZISK screw M6x20 galvanised 8.8
4	4000307	NANO steering column stru
5	1816033	ZISK screw M8x20 galvanised 8.8
6	1831020	Washer for M8 galvanised
7	1816034	ZISK screw M8x25 galvanised 8.8
8	1822001	Hexagon nut M8 galvanised self-locking
9	1822017	Hexagon cap nut M8 galvanised, self-locking
10	1812056	SK screw M8x25 galvanised
11	4000373	NANO mounting bracket switch plate left
12	4000374	NANO mounting bracket switch plate right

4. Steering & front axle assembly

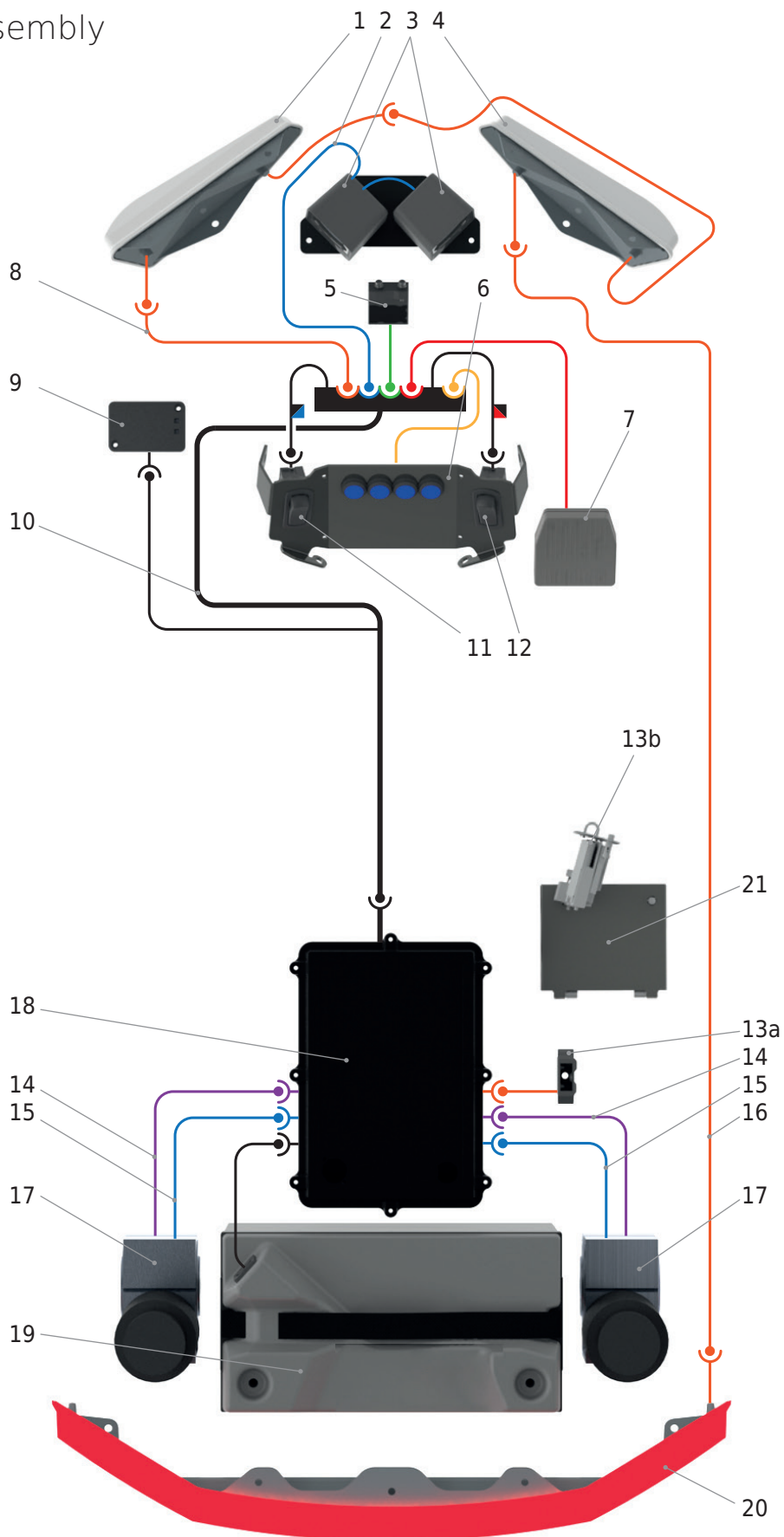


4. Steering & front axle assembly

No.	Item no.	Naming
1	4000283	NANO steering wheel black
2	1818036	Countersunk screw M6x35 galvanised
3	4000254	NANO steering wheel mount
4	1831020	Washer for M8 galvanised
5	1822017	Hexagon cap nut M8 galvanised self-locking
6	1822002	Hexagon nut M10 galvanised self-locking
7	1831057	Washer for M10 galvanised
8	1324144	Plain bearing w. collar IGUS JFM-3038-30
9	4000260	NANO oscillating axle Shaft
10	1816060	Z-ISK screw M10x85 galvanised 8.8
11	1822006	Hexagon nut M14x1.25 galvanised self-locking
12	4000354	Washer 28x15,2x4 VA
13	4000353	Nano steering knuckle spacer 25x15,2x3 VA
14	1783015	Bearing 6902-2RS 28x15x7
15	4000279	NANO steering knuckle left
16	4000352	NANO steering knuckle spacer sleeve 20x15.2x4.25 VA
17	4000411	Axle front wheel NANO
18	1816063	Z-ISK screw M10x30 galvanised 8.8
19	1383057	Spacer sleeve 3mm VA for steering knuckle fork

No.	Item no.	Naming
20	1816094	Z-ISK screw M10x35 galvanised 8.8
21	1324143	Spherical plain bearing IGUS KBRM-10-MH
22	1819024	Grub screw M8x16 galvanised
23	4000355	NANO steering knuckle bolt 15x68 M14x1.25 VA
24	1816051	Z-ISK screw M4x12 galvanised 8.8
25	1811002	Lock screw M8x20 galvanised without nut 8.8
26	1381098	Upper steering column bearing shell
27	1381288	Top steering bearing JEM-20-17 Spherical cap
28	1816044	Z-ISK screw M8x12 galvanised 8.8
29	1822001	Hexagon nut M8 galvanised self-locking
30	1831033	M8 washer - 8.4x30x2.5
31	4000278	NANO track rod
32	4000275	NANO oscillating axle
33	4000262	Tie rod bearing block for ball
34	1324142	Bearing - Spherical cap IGUS JKM-10-14
35	1832014	Circlip DIN 471 10x1.0 galvanised
36	1324119	Pedal bolt 15x75 RiMO brake
37	1816008	Z-ISK screw M8x50 galvanised 8.8
38	4000263	NANO steering column

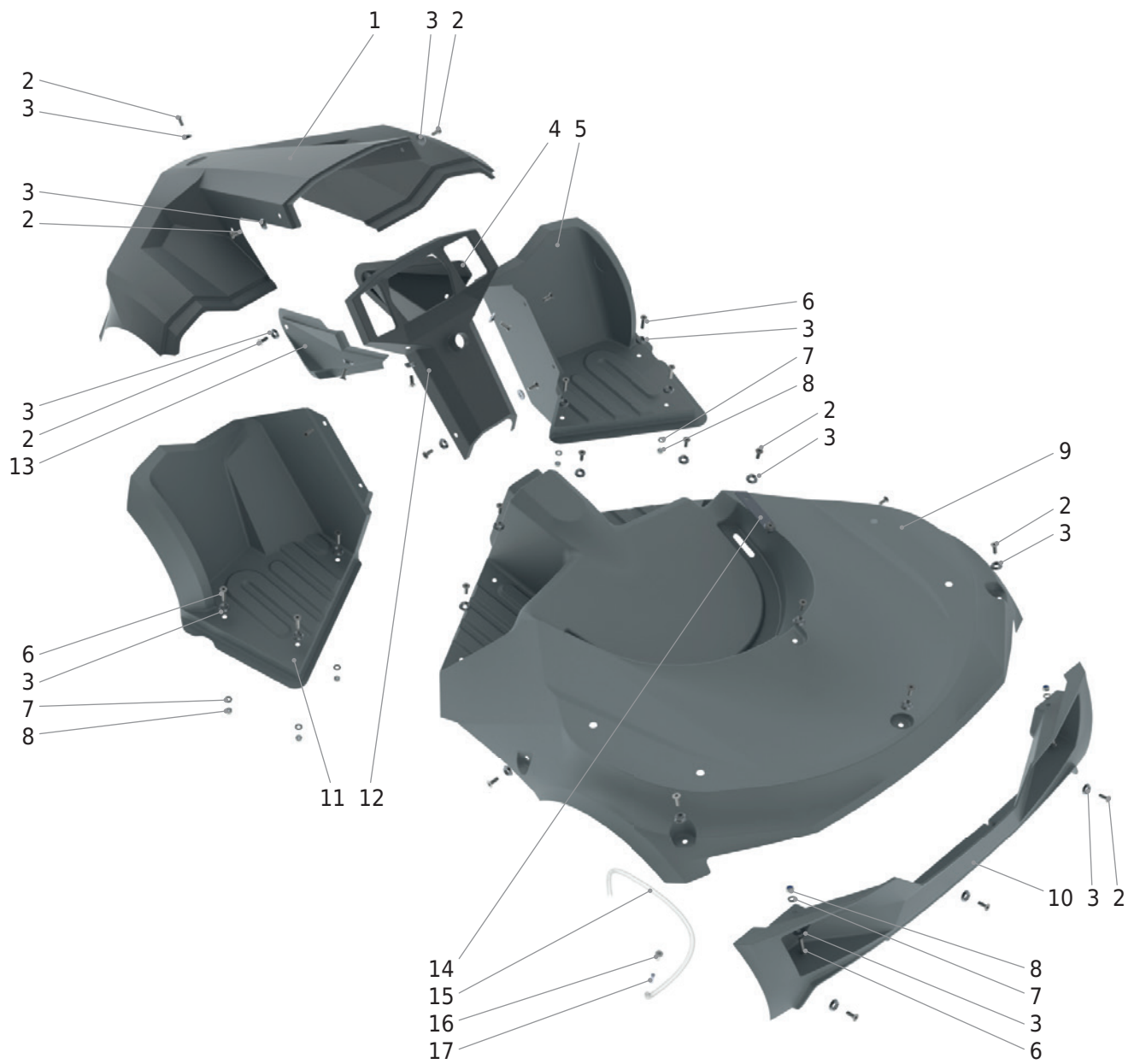
5. electrical assembly



5. electrical assembly

No.	Item no.	Naming
1	4000264	NANO headlight left
2	1389334	NANO cable speaker connection
3	1383198	NANO loudspeaker
4	4000265	NANO headlight right
5	4000327	NANO steering angle sensor
6	4000375	NANO console switch plate
7	4000225	NANO accelerator pedal V2.0
8	1389329	NANO cable front light
9	1389450	RiMO Reader SiNUS NANO
10a	1389429	NANO wiring harness 2WD coin tester version
10b	1389430	NANO wiring harness 2WD RFID version
11	1383191	Horn button
12	1383190	Forward/reverse button
13a	4000326	NANO Remote Module
13b	1381263	NANO coin validator
14	1389378	NANO 2WD power cable engine side
15	1389381	NANO 2WD data cable motor side
16	1389330	NANO cable rear light
17	1382289	Motor / gear unit for NANO
18	1789390	NANO 2WD control box
19	1389472	Battery LiFePo4 36V 45Ah complete
20	4000266	NANO rear light
21	4000304	NANO coin cassette complete

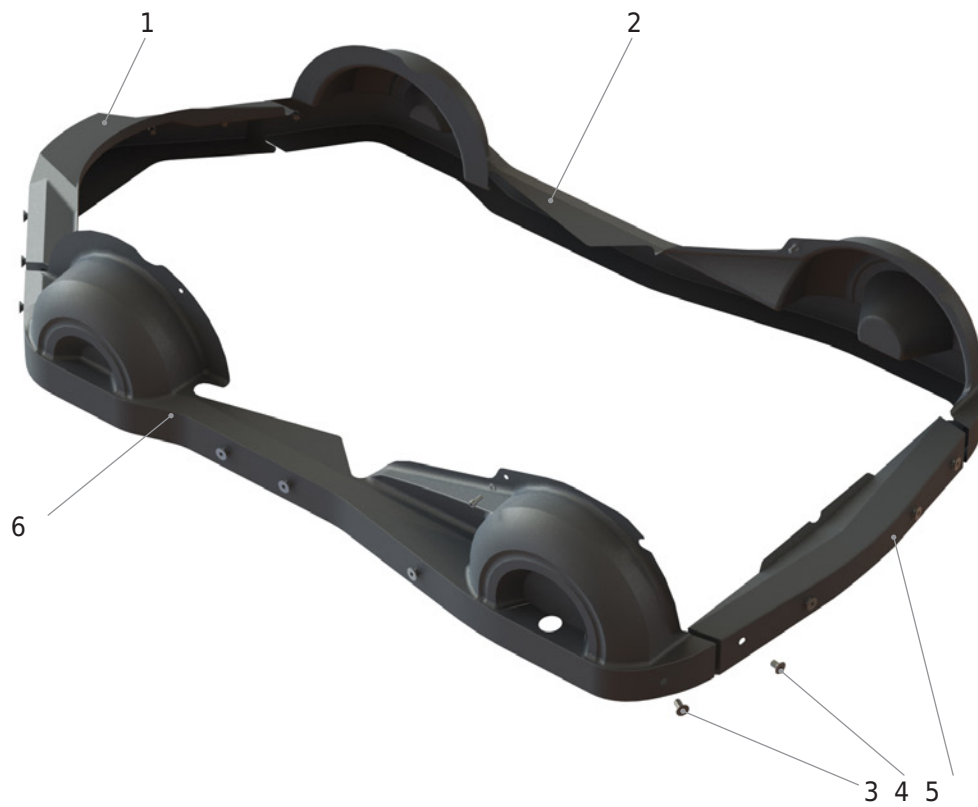
6. Bodywork assembly group



6. Bodywork assembly group

No.	Item no.	Naming
1	1384289	NANO spoiler shield
2	1818035	Countersunk screw M6x20 galvanised, spot-coated
3	1834003	Countersunk washer 6.4x18 Al. for countersunk screw M6
4	1384291	NANO panel right
5	1384217	NANO centre section right
6	1818006	Countersunk screw M6x20 galvanised
7	1831030	Washer for M6 6.4x20x1.25 galvanised
8	1822012	Hexagon nut M6 galvanised self-locking
9	1384286	NANO folding seat coin-operated
10	1384287	NANO rear cover
11	1384288	NANO centre section left
12	1384299	NANO console
13	1384290	NANO cover left
14	4000334	NANO cover bushing belt
15	1052005	Petrol hose transparent
16	1388047	Rivet nut M8 aluminium
17	1383023	M8 adjusting screw

7. all-round protection assembly



7. all-round protection assembly

No.	Item no.	Naming
1	1384294	NANO front shock absorber
2	1384293	NANO all-round protection right
3	1818101	Countersunk screw M10x20
4	1818099	Countersunk screw M10x16
5	1384295	NANO rear bumper
6	1384292	NANO all-round protection left

8. wheels assembly



8. wheels assembly

No.	Item no.	Naming
1a	1386003	NANO 2WD rear wheel incl. rim solid rubber from 06/2024
1b	1386004	NANO Airless Tyre 60/70-6.5 10x2.5 black (Set of 2 pieces)
2	1386147	Wheel spider 25mm x 63mm complete
3	1822036	Hexagon nut M8 galvanised self-locking
4	1831057	Washer M10 - 10.5x20x1.8mm galvanised
5	1816019	Z-ISK screw M10x20 galvanised 8.8
6	1389432	Rubber wheel 200mm
7	1831016	Washer M5 5,3x10x1 galvanized
8	1816004	Inner hexagon screw M5x70 galvanized 8.8 ISO 4762
9	4001127	Spacer sleeve l=36.5 ad=10 id=5.3 (Nano 2WD tire/rim)
10	1822024	Hexagon castellatednut M5 galvanized, self-locking DIN986



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