

Invacare Seating Systems

The Invacare's seating system range offer a wide variety of options that make for extremely versatile powerchairs.



Formula CG Tilt



Formula CG Recline



Formula CG Tilt/Recline (TR)



Formula CG Tilt/Recline/Elevate (TRE)



Elevate



SuperLow Tilt



Yes, you can.®

Power Wheelchair Features Defined





A new engineering innovation

As one of the world's leading manufacturers of power and active wheelchairs, Invacare is at the cutting edge of engineering innovation in the field of personal mobility. The latest innovation from Invacare takes the form of our patented G-Trac® technology, which raises the bar for power wheelchair control and is set to become a benchmark in the industry.

How G-Trac® works

G-Trac® functions just like an electronic compass by greatly improving track performance and traction. Whether driving at higher speed outdoors or at a slower pace indoors, Invacare's G-Trac® technology is similar to the ESP function found in modern cars, adding new levels of user control and providing a safe and consistent driving experience.

Users regain control of their environment

Obstacles, inclined pavements, slopes and slippery ground all reduce wheelchair's intended path. The frequent steering corrections required to stay on course can be tiring and can lead to loss of control. G-Trac® helps drivers follow a straighter path with fewer corrections so users truly feel they are controlling their environment, not the other way around. Whilst regular users of power wheelchairs will appreciate the added G-Trac® functionality, it is particularly beneficial to those using alternative controls such as sip-n-puff, tablet controls, scanners, digital head arrays or latched driving modes.

G-Trac® provides constancy at low speeds...

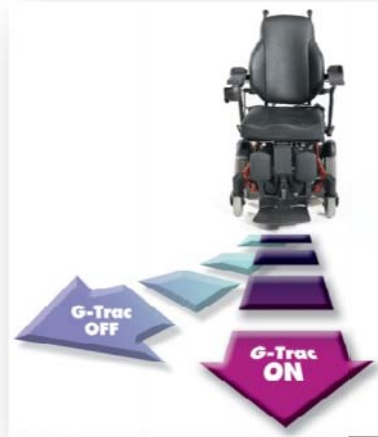
When driving at slower speeds, a change in surface material can cause loss of speed or direction. G-Trac® helps maintain a constant pace and steady course, regardless of changing surface conditions.

...and keeps pace in faster modes

Higher speeds and fast approaches to corners often mean that wheelchairs can start to spin or skid yet driving around hard curves or executing rapid manoeuvres is often too slow. G-Trac® works by analysing driving parameters and only reduces the speed as much as is absolutely necessary; it balances these movements early on and adjusts the speed to ensure the wheelchair trajectory and guarantee user safety. The end result? A more agile and lively driving performance.

G-Trac® technology can currently come standard free of charge on most Invacare powerchairs.

G-Trac®: the fast track to a better drive.



SureStep®

SureStep ultimately allows for a smoother transition down from obstacles. The rear low pivots aids in obstacle climbing. Front high pivots keep the chair stable. The downward travel makes coming off an obstacle effortless and nearly silent



Common Components and Technology

Across the Invacare range of powerchairs there is a number of common parts and technologies, this includes the likes of electronics, seating systems, motors, G-Trac technology, to name a few. The benefits of this are:

- Service agent training and knowledge
- Ease of refurbishment
- Assessor and client familiarity of technology (e.g. common controller)
- Reduction of parts SKUs and stock holding
- Faster repair and servicing

New SSD Motor

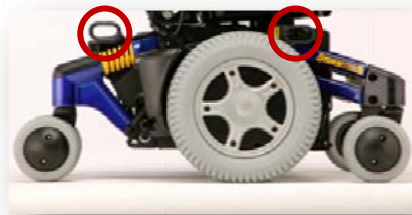
Invacare has developed and manufactured a new Single Stage Drive (SSD) motor. This is currently on the Invacare FDX and will be available on other Invacare powerchairs from late 2010, including the TDX SP.

- The new SSD drive system is more efficient than previous 2 and 4 pole motor designs (e.g. an Invacare Europe RWD chair that had a range of 36kms with a current 4-pole motor will have a range of 42kms with the new SSD 4 pole motor. and
- Consolidates motor-gearbox combinations, reducing SKUs.
- As a two piece unit, the new SSD motor is easier to service because the motor-gearbox modules can be replaced separately.
- In addition, the SSD drive technology will be completely designed and manufactured by Invacare, further enhancing overall quality.



Transport Tie Down Brackets

Invacare Corporation has transport tie-down options on most of its power wheelchairs, including the Invacare® TDX™ Total Driving eXperience and Invacare® Storm Series®. These chairs are among the few in the industry that have passed the crash-testing guidelines of ANSI/RESNA WC Vol. 1 Section 19, commonly referred to as "WC 19". The goal of WC19 is to improve securement of wheelchairs in moving vehicles and prevent wheelchairs and wheelchair components from becoming projectiles in the case of an accident. Until a standard is adopted, Invacare recommends that wheelchair users not be transported in vehicles of any kind while in the wheelchair, and that the tie-down option be used to secure an unoccupied wheelchair only.



Beyond "Securement Brackets"

Invacare's transport tie-down options go beyond the traditional "securement" brackets on other wheelchair designs. The options include four tie-down locations that have been crash tested and are clearly marked for the caregiver to see. The systems also include a battery securement system that prevents batteries from becoming projectiles in the case of an accident.

Suspension

Monroe® Spring Shock Suspension

Monroe Spring Shock system allows for up to 2 inches of movement to absorb impact and provide maximum dampening for all weight capacities.



Rubber Element Suspension

The Rubber Element Suspension is designed to absorb significant jolts and impacts. Standard on the Ranger™ X, Torque™ SP and Torque™ 3.



Shock Fork Suspension

Utilizes elastomer dampeners that may be changed to provide dampening for all weight capabilities. Designed for 8" casters.



Colour MPJ

This new colour joystick will replace the existing monochrome display screen on all Invacare power wheelchairs using MK6 electronics.

The use of a colour display on the MPJ+ joystick does more than simply provide improved aesthetics. Colour is employed to the user's advantage as it will help designate drive mode and status. New icons will be easier to view, and more intuitive to understand, and background colours are even programmable to allow choice for viewing indoors and outdoors. New features of this new MPJ joystick include a real time clock and improved battery diagnostics. It is compatible with existing Invacare power chairs using MK6 electronics.



Infrared Controller and Mouse Emulator

Infrared Controller - Allows Power Chair users to control and operate Infra-red enabled devices with their Driver Control (Television, DVD, Stereo, IR Phone, X-10 devices, etc)

- Simple operation for the User!
- Supports 4-Quadrant (Joystick) and 3 Quadrant (Head Control users).
- Head Array users can tilt back and still have access to all IR Features
- No Computer required for set-up / programming
- Easy access to many important IR devices

Computer Mouse Emulator -Allows Driver Control access to a wireless Computer Mouse

- **RF Mouse Control** comes standard with the IR Module
- Provides **Wireless** communication with the computer
- Gives the power w/c user **full access** to a PC Windows environment.
- Use with "**On Screen Keyboard**" to type documents / e-mail, etc
- Compatible with PC or MAC Computers



Expandable MK6i Electronics

MK Series electronics are the benchmark in power wheelchair drive systems. This is the result of years of experience in the design and manufacture of electronics specifically for the needs of wheelchair consumers.

Expandable Systems are intended to provide more functionality for users and meet more complex needs. This includes current as well as anticipated needs in the future. An Expandable System will be required to meet the following user needs:

- Allow use of a Switch Driver Control or a Sip-N-Puff Driver Control
- Allow use of Specialty Proportional Controls (Chin, Lip, Head, Mini, Low Force Joysticks, etc) due to inability to operate a standard joystick
- Allow use of a specialty configured Joystick due limited hand function that limits access to either the joystick inductive or operational (on/off / Drive select) switches.
- Provide access to Multiple programmed Drive modes for safe mobility (i.e., indoor, outdoor, ramps and curbs, rough terrain)
- Provide Full programmability for Independent Driving
- Allow use of an attendant Control for care-giver assist during transfers / transportation / positioning for ADL's. Allow access to a remote On/Off Switch for safety and independence.
- Allow access to operate multiple powered seating actuators through the driver control due to an inability to operate a separate actuator switch in either the upright or recumbent position
- Allow access to operate ECU's and/or emergency call systems through the driver control for safety and Independent
- Allow access to operate an Alternative Communication device through the driver control due to impaired / absent speech
- Allow access to a separate display other than the Joystick LED's for visual or cognitive impairments



Quiet Stability Lock

Is a gas locking cylinder, which replaces the traditional metal gear set. When stability lock engages, the gas locking cylinder actuation eases the user to a stop and is nearly silent. The gas locking cylinder also provides a shock absorbing effect that removes the vibration often felt over small bumps or cracks in the sidewalk.



True Track (TT)

The patented TrueTrack technology features GB motors and motor controller. This feature helps keep the power wheelchair on a true forward path – even on many slopes, thresholds and uneven terrains. TrueTrack minimises the need for veer correction, diminishing fatigue for joystick and switch drivers. TrueTrack Technology is beneficial for the client for the following reasons:

- As the power wheelchair holds a truer course, the driver needs to make fewer course corrections.
- This makes driving more efficient by reducing the necessary amount of movement. Reducing the required movement can increase overall speed (i.e. the client may be able to move down a hallway faster, as less compensatory movements are required), decrease fatigue, and promote safety/independence while driving, because the chair is not pulled off course. This is true for drivers using a proportional control as well as a digital or non-proportional system.
- This feature is critical for clients who fatigue easily, as less compensatory movements are required.
- This feature also is critical for clients who use a non-proportional or digital access method (i.e. a head array with proximity switches or pneumatic sip-n-puff controls). Driving with switches can be very tedious and inefficient. Making frequent course corrections significantly increases the effort, time and energy required. Fewer course corrections translates to a more efficient, safer driver.



True Centre-Wheel Drive

The tightest possible turning radius comes from the True Center-Wheel Drive chassis. The TDX® range uses this type of wheelbase to provide excellent manoeuvrability and an intuitive driving experience. This technology combined with Enhanced SureStep®, Traction Control Design and Quiet Stability Lock makes the TDX a great indoor and outdoor chair.

