



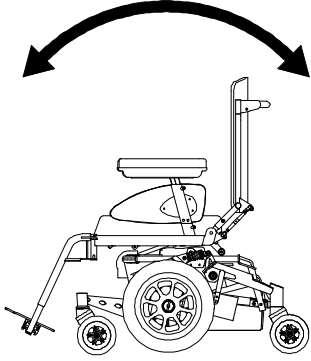
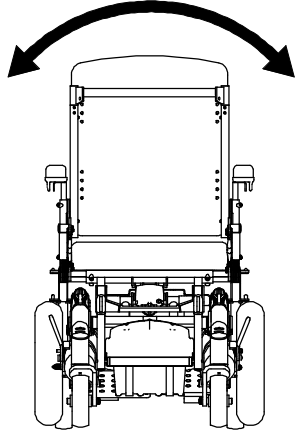
The Atigra Power Base has been specially designed and extensively tested. It has been designed to be stylish, strong and durable, and is built with the following key functions in mind:-

1. A high level of manoeuvrability
2. Excellent client driving comfort
3. The ability to cross uneven ground including shallow drains and gullies and not lose drive wheel contact with the ground (*the V ground test*)
4. The ability to cross over ridges and not lose chair stability
5. A high level of longitudinal seat stability when the chair is climbing, descending or stopping quickly
6. A high level of lateral stability when the chair is turning or traversing slopes
7. Reasonable obstacle climbing ability
8. Adequate speed and driving distance
9. Transportability
10. Strength and durability

[Atigra - a good choice for clients who want a power base that's Stylish, compact, highly manoeuvrable, stable & safe](#)

Manoeuvrability	<p>The ability to manoeuvre in very confined spaces can be very important, especially in older homes where there is limited space to turn into key areas such as</p> <ul style="list-style-type: none"> • Corridors • Bedrooms • Bathrooms • Toilets <p>The smaller turning circle of most mid wheel drive power wheelchairs can often help.</p>	<p>Atigra is a compact mid wheel drive power wheelchair that can navigate through many confined spaces that other wheelchairs cannot.</p>
Client Driving Comfort	<p>Driving comfort is measured subjectively by the wheelchair user (ie how smooth and comfortable is the ride when driving over various surfaces?) Ideally all unevenness of the driving surface would be removed by the wheelchair suspension system, and thereby provide the user with a smooth and stable ride.</p> <p>Our design considerations included driving on</p> <ul style="list-style-type: none"> • A bitumen car park • A concrete slab footpath • Descending from a kerb • Grass and sand surfaces 	<p>The drive tests showed the Atigra as having an excellent suspension system that provides good driving comfort for the wheelchair user.</p>
V ground performance	<p>It is important that the suspension system will cross uneven ground including holes, shallow gullies and drains in a manner that the drive wheels do not lose contact with the ground, & thus driving traction.</p>	<p>Atigra performed well, better than most competitive brands.</p>
Ridges	<p>Sharply angled ridges may cause the front wheels to lose contact when going over them, in some cases resulting in a loss of wheelchair stability and control by the client.</p>	<p>Atigra's uniquely designed suspension system helps to maintain good ground contact and stability when going over ridges</p>



<p>Longitudinal stability</p>	<p>Getting good longitudinal (forwards/backwards) stability is very important for the wheelchair user.</p> <p>A suspension that is too stiff</p> <ul style="list-style-type: none"> • will not allow good client ride comfort • will not allow good V ground performance • may inhibit obstacle climbing <p>A suspension system that is too soft may allow the seat to rock backwards & forwards easily,</p> <ul style="list-style-type: none"> • which may cause distress to the client, • in cases where clients have poor trunk control, the possibility that the client may fall out of the wheelchair 	<p>Atigra has a soft front suspension but stiff rear suspension. The combination has been designed to allow reasonable obstacle climbing, have good driving comfort, but to maintain good longitudinal (forwards/backwards) stability to protect clients with poor trunk stability</p> 
<p>Lateral stability</p>	<p>It is important to have stability when</p> <ul style="list-style-type: none"> • making a sharp turn at speed or • when traversing cambered slopes <p>A poor wheelchair suspension system can allow the seat rotate sideways (out of the turn) when the chair is turned sharply, or tilt sideways when traversing across a reasonably cambered slope. The loss of stability may cause the client to lose control of the wheelchair, and in extreme cases for the wheelchair to turn over.</p>	<p>The tests show that Atigra's lateral stability is good when turning sharply up from low to moderate speeds, and very good when crossing cambered slopes.</p> 
<p>The ability to climb low obstacles</p>	<p>The ability to climb obstacles such as small steps and low kerbs is important for entry into buildings, climbing low kerbs when crossing roads etc.</p>	<p>Atigra has been designed to climb a 50mm obstacle, thus allowing the wheelchair to enter into houses and other buildings with small steps or door tracks, and to be able to climb low kerbs when crossing roads.</p>



<p>Motor torque, wheelchair speed & driving distance</p>	<p>Power wheelchairs need to be designed with sufficient motor torque to</p> <ul style="list-style-type: none"> • provide adequate speed, • carry the maximum client weight when performing all the normal functions of starting, stopping, climbing, descending, climbing small obstacles, and yet • be able to drive reasonable distances on a single battery charge. <p>Underpowered motors will not perform satisfactorily; over powered motors for the wheelchair will require either larger battery capacity (and thus higher chair weight, and greater cost), or will be able to drive limited distances only.</p>	<p>The EMD motors used on the Atigra have been designed to carry a maximum client weight of 125 kgs at a maximum speed of 10 kph, with adequate power for climbing a 50mm obstacle. The estimated driving distance is between 20 to 25 kilometres, depending on client weight, terrain and driving conditions.</p>
<p>Motor & gearbox noise</p>	<p>Ideally a motor gearbox combination will be silent when operating. Gearboxes in particular need to be carefully designed with low tolerances and a high level of internal engineering support to reduce gear whine when operating.</p>	<p>The new EMD motor / gearbox system used on the Atigra is very quiet by comparison to most power wheelchair systems</p>
<p>Motor & gearbox durability</p>	<p>Motors and gearboxes have to work hard on power wheelchairs. To get a long working life, the motors and gearboxes need to be carefully and conservatively designed, with rugged components and a high level of internal engineering support, and good lubrication systems.</p>	<p>The motor / gearbox system used on the Atigra has been extensively tested by EMD. Testing by them shows it to have a long working life.</p>
<p>Transportability</p>	<p>It is important to be able to tie down a wheelchair with an approved system for transport in a motor vehicle</p>	<p>Atigra has specifically designed and labelled tie down positions at the front and rear of the base frame for transporting the wheelchair in buses, maxi taxis etc</p>
<p>Strength and durability</p>	<p>Power bases are subjected to high stress levels due to the work they perform when starting, stopping, climbing, descending, going over obstacles etc. The power base must be designed scientifically with these forces in mind to be able to provide reliable service over many years.</p>	<p>Atigra base has been scientifically designed and tested on a high level CAD system. It is constructed from heavy duty materials to provide strength and durability.</p>