

Independent Rehabilitation Suppliers Association
of NSW

September 2008

Submission to

NSW Legislative Council Inquiry
Program of Appliances for Disabled People
(PADP)

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1. Executive Summary

Suppliers of equipment for people with disabilities and the elderly play a pivotal role in the entire equipment supply process yet are seldom consulted when it comes to developing Government policies and processes regarding schemes such as PADP. This was the case in the NSW Government's 2006 PADP Review undertaken by PricewaterhouseCoopers. The Independent Rehabilitation Suppliers Association of NSW (IRSA) is now the largest organisation of its type representing the views and aspirations of equipment suppliers.

The NSW PADP scheme is of great importance to IRSA members, who would provide the majority of non-consumable equipment funded by the program.

The goals of IRSA members are closely aligned to the goals of individuals with a disability, the elderly and their caregivers. A competitive, ethical, energetic and viable industry is essential to deliver the high service levels required by therapists and end users who rely on a range of equipment for their daily living.

IRSA's members believe there are a range of initiatives that need to be implemented to improve end user outcomes, reduce cost to Government and increase the viability of our industry. This submission makes a number of important recommendations in regard to client assessment, equipment trials, payment of invoices, sole supplier contracts, equipment service and maintenance etc. These recommendations demonstrate our willingness to work with all stakeholders to deliver a better PADP scheme.

- There is approximately \$4,000,000 per annum to be saved by Government and business in moving to a pre-approved funding model and by reforming the client assessment and re-assessment process.
- It is estimated that overdue PADP payments cost business more than \$1,200,000 annually in interest and recovery costs.
- EnableNSW must ensure PADP policies and practices are commercially realistic, considering the high service levels required by therapists and end users.
- Sole supplier contracts must be carefully constructed to ensure service levels are maintained and costs do not escalate as has been the case in other States.

- Special consideration has to be given to suppliers in rural and remote areas to support their viability so they can continue to service people with disabilities and the elderly who live outside the major metropolitan centres.
- Equipment servicing and maintenance needs to be given greater focus to ensure cost effectiveness and the safety of end users and care givers.

The viability of our industry is under threat from rising business costs, demands for higher service levels, increased compliance/red tape and poor payment practices of some Government agencies. The fallout of business failures in our industry sector will have a devastating impact on the lives of those with disabilities and the elderly who depend on our products and services. It is incumbent upon Government at every level to ensure they conduct themselves so as to stimulate and support our industry whilst achieving best value for the public dollar.

IRSA's members appreciate the opportunity to be heard at the Legislative Council's inquiry and are committed to working with the NSW Government and other key groups to ensure a better PADP system.

2. Introduction to IRSA

IRSA was established in August 2000 to represent the interests of businesses who compete in the non-pharmaceutical sectors of the Australian healthcare industry.

Our members manufacture, import, distribute, supply, service and hire a broad range of equipment for people with disabilities and the elderly such as –

- Manual mobility aids (wheelchairs, walking frames, crutches and rollators)
- Powered mobility aids (electric wheelchairs and scooters)
- Patient lifters
- Electric beds
- Lift up chairs
- Pressure sore prevention cushions and mattresses
- Postural aids
- Respiratory products (home oxygen concentrators, aerosol compressors and nebulisers)
- CPAPs and related sleep products
- Daily living aids

IRSA member companies range from small, family owned businesses to large multi-national corporations.

IRSA and its members are also pivotal to the training and education of occupational therapists and others involved in assessing people with disabilities and specifying equipment to address their needs.

IRSA's objectives are –

1. To give our industry a voice that...
 - * Has a positive influence on Government policy via a representative, unified approach
 - * Educates Governments and other stakeholders about our industry
 - * Promotes a robust, competitive and commercially viable marketplace

2. To improve the quality of equipment provision by...
 - * Supporting the ongoing training and education of therapists and prescribers
 - * Promoting ethical business practices that safeguard the interests of the end user
 - * Participating in the development of appropriate and cost effective product standards
3. To develop alliances with all relevant stakeholders to...
 - * Drive continued improvement in outcomes for end users
 - * Minimise the total lifetime costs of equipment
 - * Ensure an open, fair and competitive market

IRSA is a not for profit industry association and is proud to be a member of the NSW Physical Disabilities Council.

3. 2006 PADP Review

The NSW Government's review of PADP presented in June 2006 by PricewaterhouseCoopers (PWC) has formed the foundation of the changes currently being undertaken to improve PADP.

Although the review makes multiple references to consultations with equipment suppliers, IRSA has not been able to find any supplier that was interviewed by PWC. Several IRSA members contacted PWC seeking to make a submission however they did not receive a response. As such we believe that the review was significantly flawed as it failed to take into account the concerns of equipment suppliers who are a major stakeholder in the provision of aids and appliances.

There are some specific excerpts from the review that should be noted –

- **6.1.1 The financial cost of the PADP scheme (page 89)** – Table 31 highlights the fact Assessment Costs (\$22.4M) are almost half of the total cost to Government of the PADP scheme. However none of the recommendations provided by PWC target potential cost savings in this area. Assessment costs are significant for equipment suppliers and could well be in excess of the Government's cost.
- **Re-assessments (page 96)** – The Review states that -
"Re-assessments required as a result of PADP waiting lists consume approximately 68 hours per assessor at a cost of almost \$2,000 per assessor."
If this figure is multiplied by the 403 FTE assessors (Table 34 on page 94) almost \$1,000,000 is wasted annually on re-assessing clients' needs due to funding delays. IRSA members believe that each re-assessment costs the equipment supplier between \$250 and \$600 and significantly adds to the frustration on the client. It is not uncommon for a supplier to be asked to re-assess a client some 18-36 months later during which time not only have the client's needs changed but the equipment that was originally selected may no longer be available or be superseded. Inevitably pricing will have changed necessitating re-quoting and re-approval. Note the recommendations in Section 4 of this submission – Client Assessment.
- **Recommendation 18 (page 154)** – This recommendation concerns the establishment of a defined equipment list. IRSA members should be consulted as to how such a list will be established and maintained to ensure that PADP clients have access to the most

appropriate, affordable and contemporary equipment. Such a list needs to be inherently flexible to take into account new equipment trends and to ensure that equipment is matched to the user, not the user's needs compromised to match the defined equipment list.

- **Appendices (page 235)** – The Review states that -

“There is an issue with suppliers not knowing the functions of their own equipment. Prescribers should not seek advice from manufacturers as the prescription needs to be an independent decision.”

Our experience suggests that the opposite is true and that it is the equipment manufacturers and suppliers who have the specialist knowledge of equipment and its appropriate application. Excluding suppliers/manufacturers from the prescription process would dramatically increase the number of inappropriate prescriptions. Appendix A4 is an example of a specification/prescription form for complex rehab equipment.

IRSA has recently established the IRSA Professional Series which provides multi-level development and education to therapists in relation to client assessment and equipment prescription. It has become obvious at these events that the suppliers' knowledge is significantly ahead of the majority of therapists.

RECOMMENDATIONS:

- That IRSA is included in any process and ongoing procedures that establish and maintain the defined equipment list.
- The NSW Department of Health collaborate with IRSA and provide support to the IRSA Professional Series to facilitate improved education and up-skilling of therapists.

4. Client Assessment

IRSA members play a major role in assessing an individual client's needs and configuring a specific and often complex equipment solution that provides the best possible outcome for the client. This process requires extensive knowledge and experience and it takes most people some years of on the job training to become proficient.

IRSA members estimate that it costs on average between \$300-\$700 to perform a detailed client assessment including travel time and administration. When PADP insists on 3 quotations to be submitted per client, the cost to industry escalates to \$900-\$2,100 per assessment with no guarantee to any supplier of eventually receiving an order.

It is important to note that these client assessments are generally performed before PADP funding has been approved for the client. The funding approval can then take from a month to 2 or more years. It is common for IRSA members to receive an order for an assessment that was done more than 18 months earlier.

When such a delay in funding approval occurs, the client inevitably needs to be reassessed adding more cost to the equipment supply process. Over this time the originally recommended equipment may no longer be available, pricing could change and of course the client's needs could well have changed.

One IRSA member who specialises in complex rehab equipment reports -

- *"Of the last 100 orders we received from PADP, the average was 144 days from quoting. Of that 100, 50 were at an average of 248 days. Basically anything over 3 months that is not a standard item we would reassess. So probably 40-50% of these quotes would at least require a follow up to full reassessment."*

The PWC review into PADP suggests that reassessments cost the NSW Government nearly \$1,000,000 annually. IRSA believes the real figure is significantly higher than this and that in addition the cost to industry is between \$2,500,000 and \$3,500,000 per annum.

EnableNSW has embraced the concept of funding pre-approval however to date no significant progress has been made to implement such a program.

RECOMMENDATIONS:

- PADP must transition to a pre-approved funding model saving Government and business more than \$4,000,000 annually.
- Suppliers should be allowed to charge a reasonable fee for performing reassessments.

- EnableNSW should establish a working committee including all stakeholders to examine the high costs of client assessment and recommend strategies that will help minimise these costs.

5. Equipment Trials

As part of the assessment process, IRSA members and other suppliers are expected to provide equipment for trial by the clients to ensure it is appropriate to their needs. These trials are generally performed free of charge by the suppliers.

There has been increasing pressure on suppliers to provide equipment for extended trials and this will add further cost to the assessment process. For example, a complex electric wheelchair and seating system may cost in excess of \$15,000 and require several hours of setup and customisation before the trial takes place (refer Appendix A3). It is commercially unsustainable to have such pieces of equipment out on extended trials.

Aside from the trial process, suppliers also provide long term loan equipment to institutions, assessment centre and the Independent Living Centre.

To undertake an equipment trial and prepare a detailed specification typically takes from 2 to 10 hours depending upon the complexity of the client's needs and the travel time to attend the consultation (refer Appendix 4 for a typical complex specification). The supplier then provides the therapist and/or PADP with detailed specifications and quotations.

Some PADP offices then use these specifications and quotations to go "quote shopping" to other suppliers (who have not participated in the lengthy assessment process) in an attempt to obtain a lower price. IRSA members have reported instances of being faxed another company's specification/quote with a request to counter quote with a lower price. This completely undermines the assessment/service model and contravenes the intellectual property rights of the supplier who developed the initial specification.

RECOMMENDATIONS:

- If the PADP system demands extended equipment trials, suppliers should be permitted to charge a reasonable fee for setup, delivery and hire of the equipment.
- EnableNSW must strictly prohibit the practice of "quote shopping" for equipment where a detailed client assessments has been performed by a supplier.

6. Payment of Invoices

Many of the suppliers that work with PADP are small businesses who operate on a very lean basis with frequent cash flow pressures. The often slow processing and payment of invoices by PADP adds significant costs to the proprietors of these businesses with increased finance and overdraft charges.

In April 2008 IRSA had to contact the NSW Department of Health's Finance Director on behalf of a member who was owed more than \$400,000 by various PADP offices of which some \$270,000 was well passed due. With the assistance of the Finance Director, payment was received promptly. Unfortunately this scenario was repeated in August 2008 and this time value of outstanding invoices was even higher.

Suppliers are often unable to finalise equipment delivery due to factors that are outside of their control such as –

- They are required to deliver to a 3rd party organisation (ie seating clinic) for additional work before the equipment goes to the end user.
- The attending therapist is unavailable for an extended period of time (ie on holiday) and delays delivery.
- The end user is unavailable due to hospitalisation etc.

Instances such as these can delay invoicing and payment for many months on highly customised and often expensive equipment that has been specifically ordered to meet an end user's requirements.

RECOMMENDATIONS:

- EnableNSW institute systems and protocols to ensure that suppliers' invoices are paid in full in 30 days.
- Suppliers are entitled to charge a commercially reasonable rate of interest on overdue accounts.
- EnableNSW meet with IRSA to agree fair invoicing practices where final delivery of equipment is outside the suppliers' control.

7. Sole Supplier Contracts

Governments throughout Australia legitimately attempt to obtain the best value for their expenditure of public monies. One common method is to utilise public tenders or contracts to force suppliers to submit their lowest price to win the business on an exclusive or semi-exclusive basis. This method although successful in some situations has major risks for people with disabilities through NSW.

Suppliers to PADP generally have to provide very high levels of service based on years of experience and knowledge of disabilities and equipment. This level of service is often overlooked when “the lowest price per widget” becomes the over riding objective.

The NSW OfficeMax experience has shown what happens when the supply of equipment to people with disabilities is treated in the same manner as purchasing paper clips or copy paper. OfficeMax took over the Q Stores operation formerly run by the Government and has now extended its product range to include healthcare items. The OfficeMax arrangement was meant to conclude in December 2007 but now appears to be extended indefinitely.

There are many instances of equipment ordered through OfficeMax having been dropped off on the front porch of an elderly or disabled person by a courier with no intention to install the equipment or train the end user and/or care givers in its proper use. Even seemingly simple items such as commodes generally need to be height adjusted to the physical environment and the end user. This is best done by a properly trained industry professional and not by a well meaning neighbour or family member.

The move to central supply contracts for standard equipment may have a drastic impact on the lives of people with disabilities and the elderly living in smaller regional centres. The viability of equipment suppliers' businesses in these areas relies upon them being able to sell a basket of goods to PADP. Removing a percentage of their income by granting sole supply to another, often larger, competitor can end up putting them out of business. This would have a major, detrimental effect on service levels to people with disabilities and the elderly living in these areas.

The Victorian Government's experience with a single supplier/broker for rehab and aged care equipment resulted in increased costs, particularly on highly customised products. No

single supplier has direct access to all products and brands and so has to source from another supplier and then adds a margin. It was broadly known throughout our industry that prices typically increased by 20-30% under this scheme. It should also be noted that the scheme has now been disbanded due to the higher costs and associated administrative difficulties experienced.

RECOMMENDATIONS:

- The OfficeMax supply scheme to PADP be cancelled and an open tender issued as soon as is practical.
- No attempt be made to purchase highly customised equipment through sole supplier contracts.
- The NSW Department of Health commits to supporting the viability of PADP equipment suppliers in rural areas.
- EnableNSW incorporate appropriate service level standards in any contract or tender for the provision of appliances to PADP.

8. Equipment Service & Maintenance

Most equipment provided under the PADP system requires some degree of ongoing maintenance or periodic inspection. This is particularly the case with more complex equipment such as patient lifters, electric wheelchairs, scooters etc. PADP currently engages a range of companies or individuals to provide this service with little regard to qualifications and training.

The range and complexity of equipment provided to PADP requires that only properly trained and accredited individuals undertake the necessary maintenance and service. When this is not the case the end user or carers may be placed at risk and often costs escalate.

IRSA members have provided the following examples –

- *“PADP called a low cost service company to repair one of our wheelchairs. They could not repair it, but still billed PADP for the service call just adding to the costs.”*
- *“PADP engaged another service company to repair a wheelchair we had sold. They went to the client 4 times to fix an intermittent problem but were unable to rectify it, however when we attended it was fixed first time.”*

- *“Some PADP departments will not pay for the fitting of wheelchair tyres and tubes. They advise to get the NRMA to fit them. I believe that NRMA are looking at discontinuing this free community service as it was only meant to be for emergency breakdowns only.”*
- *“Most wheelchairs are supplied with a user manual that recommends a service schedule. PADP will generally not pay for regular servicing and as a result, by the time we get the call to repair the wheelchair sometimes more damage has been done. For example if you keep your front castor bearing adjusted properly you will never have a problem with the castor fork. Often by the time we get the service call we have to replace the bearings and the fork at higher cost to PADP.”*
- *“Some PADP departments are requesting we go out and see the client and then provide them with a quote to fix the problem. We send the quote and then they raise another order for us to go and fix the chair and they get billed for two call out fees and labour charges – surely there is a better way?”*
- *“We had an occasion where a another service company ordered a replacement controller for a power wheelchair as it was out of warranty and the cost was \$2600. We became aware of the replacement issue and were able to discuss it with the manufacturer and have the part replaced under warranty - saving PADP thousands of dollars.”*

Equipment which is not properly maintained and serviced can be inherently unsafe for the end user and their care givers and potentially place the Government at risk of having to pay compensation in the event of injury or death.

RECOMMENDATIONS:

- Products supplied under the PADP scheme should be serviced and maintained as per the manufacturers’ instructions.
- EnableNSW, in consultation with IRSA, review their guidelines for engaging and authorising service companies to ensure the most efficient and cost effective practices are in place.
- That EnableNSW require all service and maintenance to PADP equipment be undertaken by companies and individuals who are appropriately authorised by the original equipment manufacturer.

9. Australian Therapeutic Goods Administration

Much of the equipment supplied to PADP is classified by the Australian Therapeutic Goods Administration (TGA) as a Class 1 Medical Device. Before someone can supply such products in Australia they are required to make an application to have the products entered in the Australian Register of Therapeutic Goods (ARTG). There are different processes to do this depending on whether the application is made by a local manufacturer or by an importer/distributor of equipment that is manufactured overseas (referred to by the TGA as a sponsor).

The TGA and ARTG processes play an important watchdog role in safeguarding the interests of end users and funding bodies. They are also pivotal in managing equipment safety recalls and field modifications, however there is a cost to industry in complying with the TGA regulations.

Unfortunately there remains a number of suppliers who try to operate outside the TGA regulations by importing equipment through various channels not authorised by the original manufacturer, by substantially modifying products or by selling equipment which has not been listed on the ARTG. This places end users and funding bodies at risk of purchasing potentially unsafe or untraceable equipment and is likely to compromise manufacturers' product warranties.

Government agencies who purchase equipment from these suppliers undermine the TGA governance process and impact on the business of those companies who act responsibly in complying with the TGA. This could also place the likes of EnableNSW at risk of litigation in the event that someone is injured or killed as a result of being provided with equipment that was not listed on the ARTG.

RECOMMENDATIONS:

- PADP should only purchase equipment that has been properly listed on the ARTG and should request from suppliers the relevant ARTG number.
- To avoid potentially high liabilities, PADP should only purchase equipment from those companies authorised and trained by the manufacturer to sell the equipment.

10. Industry Viability

The home medical equipment industry is typified by relatively low profitability due to high service costs and low product margins. A 2007 US based study on the Complex Rehab Industry performed by the University of Rochester (refer Appendix A2) highlights this fact.

The study concludes that –

- *“Under such low profitability it is extremely hard to forecast the future financial performance of the industry; because the threat of more & more firms exiting the industry becomes stronger as profitability goes lower... ..These results are shocking since it is hard to imagine what drives these companies under such low levels of profitability?... ..this is a cause driven industry which serves the needs of thousands of disabled people in the need of rehabilitation. An industry like this being struck by a financial crisis could further have detrimental microeconomic & macroeconomic effects as a whole.”*

In discussions with NSW based suppliers it is evident that our local industry faces similar profit pressures that threaten its viability. Gross margins of domestic suppliers (non-manufacturers) are typically 5-13% lower than those reported in the US study. This suggests that our local industry may operate leaner and more efficiently than our US counterparts.

The low profitability of our industry sector is in contrast to other medical sectors such as pharmaceuticals and medical consumables. In recent times this has been fuelled by a dramatic reduction in the average sell prices of standard equipment, added equipment complexity, increased compliance costs and a demand for higher and higher service levels.

There is also significant generational change underway within our industry sector as many of the pioneering business leaders reach retirement age and either sell their business or simply close down. What is disturbing is the lack of new entrants into this industry, particularly in the more complex and demanding equipment sectors.

Several multi-national companies have sought to buy into the Australian industry over the past 4 years and on the whole have been disappointed by the low profitability of the businesses they have acquired. This has led some of these companies to rationalise their businesses and exit high service, low profit areas of the market which in turn reduces choice and service levels for people with disabilities and the elderly.

RECOMMENDATIONS:

- The NSW Department of Health join a review of the viability of PADP suppliers and establish what Government practices can be improved to deliver better outcomes for Government, business and most importantly the end user.

Appendices

- A1 IRSA Member Companies
- A2 US Study on the Complex Rehab Industry
- A3 Article – “The journey to Matt’s mobility”
- A4 Complex Equipment Specification Example

Appendix A1 – IRSA Member Companies

Dejay Medical

1 Prince William Drive
SEVEN HILLS NSW 2147
Ph (02) 9838-8869
Fax (02) 9838-7869
www.dejay.com.au

Disability Hire Vehicles

49 Hession Road
OAKVILLE NSW 2765
Ph (02) 4573-6788
Fax (02) 4573-6989
www.disabilityhire.com.au

E&S Wheelchair Sales

Unit 6 - 1 Field Close
MOOREBANK NSW 22170
Ph (02) 9822-4323
Fax (02) 9822-4207

GTK Rehab

Unit 11 - 14 Boden Road
SEVEN HILLS NSW 2147
Ph (02) 9620-9177
Fax (02) 9620-9081
www.gtkrehab.com.au

Home Safety and Comfort

2/187 Lake Road
PORT MACQUARIE NSW 2444
Ph (02) 6581-2400
Fax (02) 6581-2422

Independent Living Specialists

67 Mars Road
LANE COVE NSW 2065
Ph (02) 9427-4995
Fax (02) 9427-4338
www.ilsau.com.au

Invacare Australia

1 Lenton Place
NORTH ROCKS NSW 2151
Ph (02) 8839-5333
Fax (02) 8839-5353
www.invacare.com.au

Hospital at Home (Eniax Pty Ltd)

2/30 Heathcote Road
MOOREBANK NSW 2170
Ph (02) 9601-6909
Fax (02) 9601-7870
www.hospitalathome.com.au

Kalnin Corporation

PO Box R1751
ROYAL EXCHANGE NSW 1225
Ph (02) 8259-9600
Fax (02) 9247-6990
www.agedcaretechnologies.com

Lifehealthcare

5 George Place
ARTARMON NSW 2064
Ph 1300 133 120
Fax (02) 9618-5111
www.lifehealthcare.com.au

Met-A-Lite Manufacturing Company

17-19 Mitchell Road
BROOKVALE NSW 2100
Ph (02) 9905-3947
Fax (02) 9905-2213
www.metalite.com.au

Mogo Wheelchairs

Unit 5 – 42 Canterbury Road
BANKSTOWN NSW 2200
Ph (02) 9708-5255
Fax (02) 9796-2470
www.mogowheelchairs.com.au

Mobility Matters

35 Townsville Street
FYSHWICK ACT 2609
Ph (02) 6280-7244
Fax (02) 6239-1281
www.mobilitymatters.com.au

Northcott Equipment Solutions

1 Fennell Street
NORTH PARRAMATTA NSW 2151
Ph 1800 11-8481
Fax (02) 9890-0924
www.northcottes.com.au

Northern River Surgical

18 Endeavour Close
BALLINA NSW 2478
Ph (02) 6686-6644
Fax (02) 6686-9383
www.intermobility.com.au

Otto Bock Australia

62 Norwest Boulevard
BAULKHAM HILLS NSW 2153
Ph (02) 8818-2800
Fax (02) 8814-4500
www.ottobock.com.au

Peak Care Equipment

1/187 Lake Road
PORT MACQUARIE NSW 2444
Ph (02) 6581-2400
Fax (02) 6581-2422
www.peakcareequipment.com.au

Pride Mobility Products

21 Healy Road
DANDENONG VIC 3175
Ph (03) 9706-4611
Fax (03) 9706-4622
www.pridemobility.com.au

Scooters & Mobility Group

13 NSW Outlets
www.scootersandmobility.com.au

Seating Dynamics

Unit 3 - 19 Boden Road
SEVEN HILLS NSW 2147
Ph (02) 9620-7839
Fax (02) 9012-0087
www.seatingdynamics.com.au

Specialised Wheelchair Company

Unit 5 - 26 Wattle Road
BROOKVALE NSW 2100
Ph (02) 9905-5333
Fax (02) 9905-2208
www.swco.com.au

Sunrise Medical

Unit 7 - 15 Carrington Street
CASTLE HILL NSW 2154
Ph (02) 9899-3144
Fax (02) 9899-3244
www.sunrisemedical.com.au

Appendix A2 – US Study

Refer following pages

Complex Rehab Industry

A study of the business & financial performance of the industry in 2007

Gautam Garg

Master's in Finance

Simon Business School

University of Rochester

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A NOTE OF THANKS

I am extremely thankful to the various organizations that commissioned me to undertake this study on behalf of the industry comprising of complex rehab equipment suppliers. Being a part of this extensive study has been an extremely knowledgeable and enlightening experience for me; and I truly appreciate the opportunity given to me in relation to the same.

I would like to express my gratitude to all the complex rehab equipment suppliers who participated in this study. Thank you very much for trusting me with your confidential business & financial information. I hope that I have done justice to your efforts in sharing the information with me; and I truly hope that the information obtained from this study would prove to be beneficial & useful for you as well in the longer run.

Yours Sincerely,

Gautam Garg

EXECUTIVE SUMMARY

The ensuing pages of this report contain an analysis of the business & operating performance of the industry comprising of complex rehab equipment suppliers (referred to as the “complex rehab industry”). The analysis is based on the quantitative analysis of the financial information which was shared by these suppliers in response to an email survey questionnaire. The survey was made available to the industry in the month of May 2008; and responses were obtained throughout the months of May & June in the same year. The **response rate** for the survey was **20%**; which is considered fairly high¹ if we take into the account the settings of the survey. The survey responses were clearly indicative of the highly diverse nature of the complex rehab industry. The companies that participated in the survey were from all across the United States; representing the states of New York, New Jersey, Wyoming, Ohio, North Carolina, Connecticut, Virginia, Idaho, California, Minnesota, Michigan, Florida & Texas to name a few. Furthermore, the participants were companies with annual revenue varying from a compact \$250,000 to an expanding \$21,000,000. To enable the understanding of the business of the complex rehab industry in a more concrete, analytical & justifiable manner; the companies belonging to the industry have been divided into three (3) major groups:

- (1) Small Companies: Annual revenue - less than \$5 Million (*representing 53% of the industry*)
- (2) Medium Companies: Annual revenue - \$5 Million to \$10 Million (*representing 42% of the industry*)
- (3) Large Companies: Annual revenue - more than \$10 Million (*representing 5% of the industry*)

¹ The survey was circulated through email; in contrast to the more conventional means like paper surveys, website surveys & in-person surveys. Further, the survey involved the sharing of confidential & privileged financial information for private corporations. A response rate of 20% in these settings is considered fairly high as per recent research & studies (see web articles below).

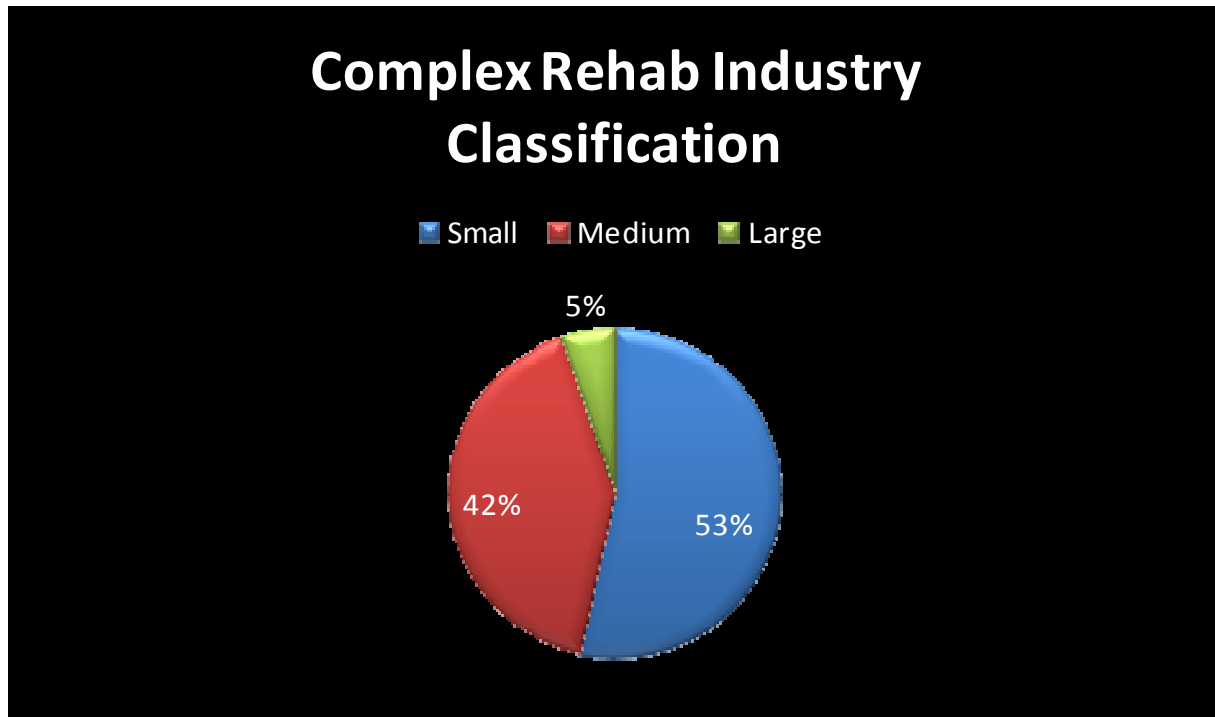
http://www.supersurvey.com/papers/supersurvey_white_paper_response_rates.pdf

<http://poq.oxfordjournals.org/cgi/content/full/68/1/94>

CLASSIFICATION OF THE COMPLEX REHAB INDUSTRY

In agreement with the survey responses, the entire industry comprising of complex rehab equipment suppliers can be classified into three (3) broad categories as discussed above.

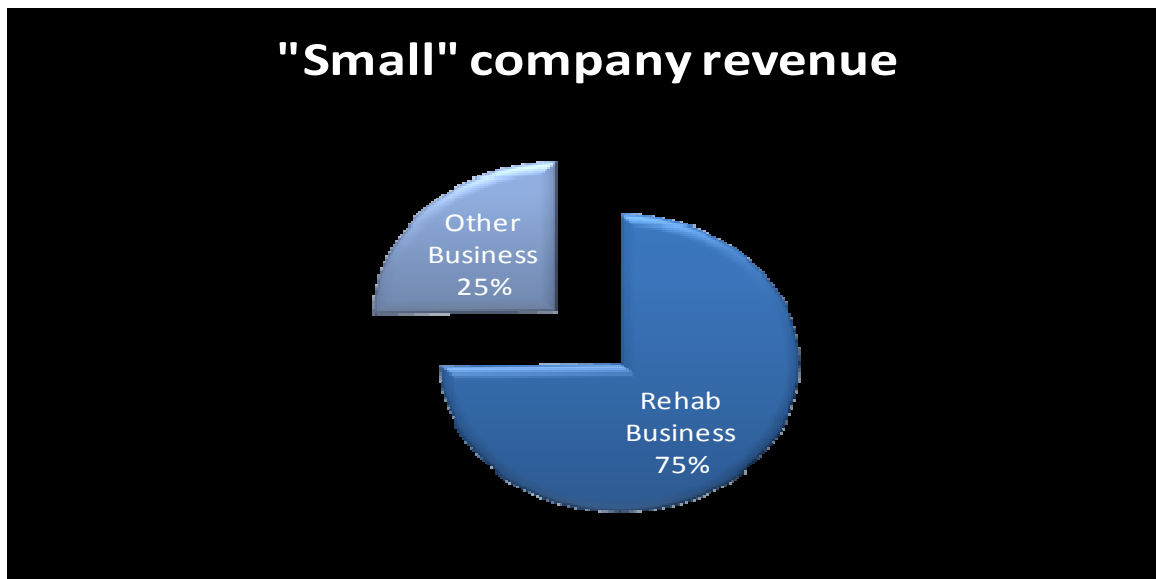
The percentages of companies belonging to each of these categories are as below:



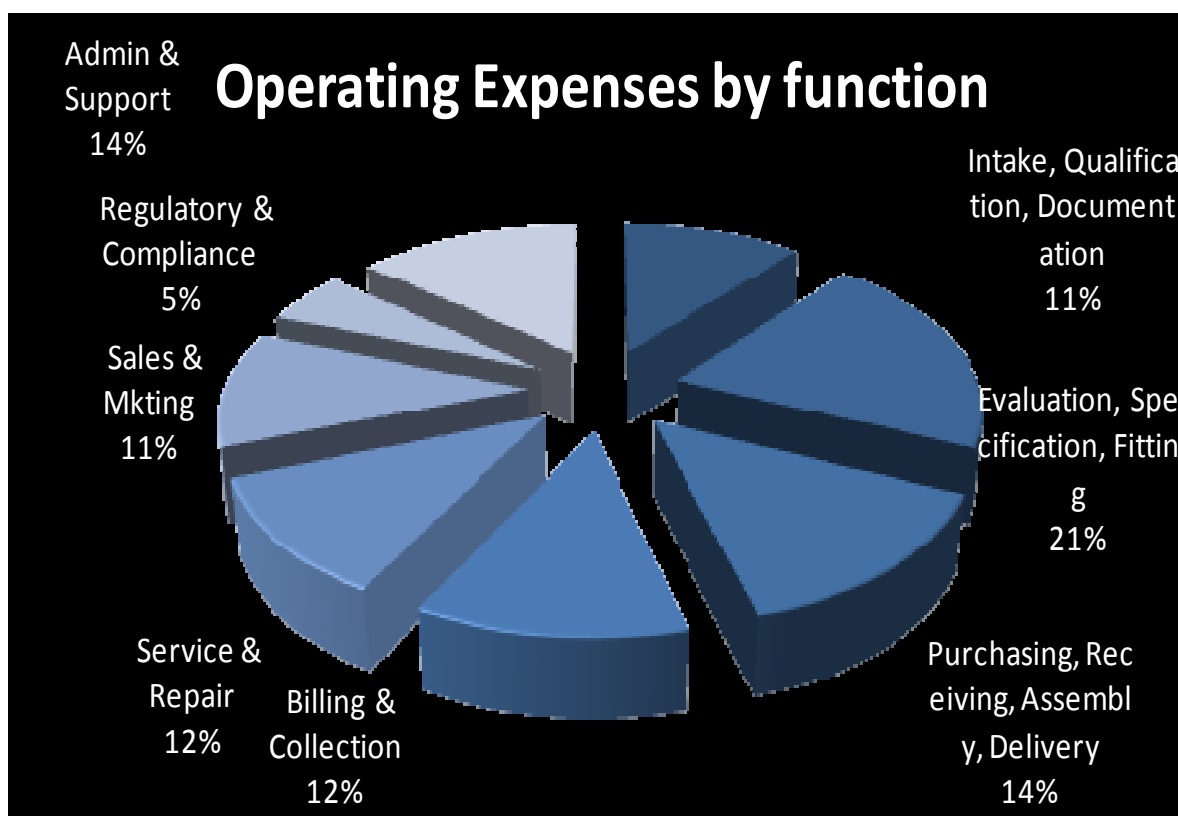
As observed, the majority (53%) of the companies in the complex rehab industry are 'Small' companies with annual revenue of less than \$5 Million. 'Medium' companies with annual revenue of \$5 Million to \$10 Million also represent a significant (42%) of the complex rehab industry. 'Large' companies with annual revenue in excess of \$10 Million represent the smallest (5%) of the complex rehab industry.

ANALYSIS OF THE “SMALL” SECTOR

- *Companies with annual revenue of less than \$5 Million.*
- *The sector represents 53% of the complex rehab industry; hence the maximum number of companies in the complex rehab industry belong to this revenue range.*
- *For the year 2007; a significant percentage of the companies suffered losses (or made negligible profit) as evident from the pretax profit expressed as a percentage of revenue. An average of 33% of the companies into losses or making negligible profits.*
- *On an average, a typical “small” company earns 75.42% of its revenue from the rehab business.*



- *The following represents the average breakup of the operating expense by function based on 2007 financials for the companies belonging to this sector:*



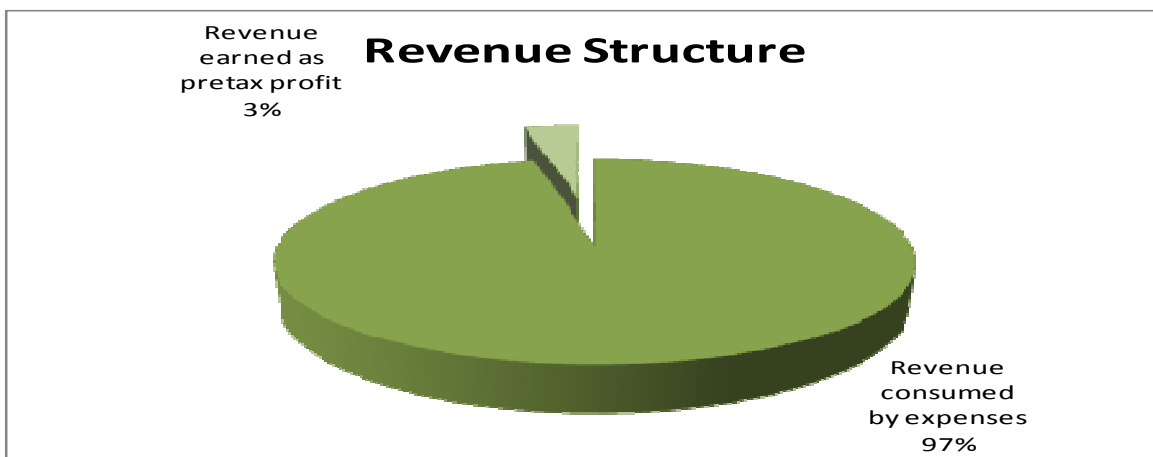
- *The common size analysis² of the average income statement (I/S) for 2007 is as follows:*

Common Size Analysis of I/S (average % of revenue)

Revenue	100.00%
Cost of Sales	50.16%
Gross Profit	49.84%
Operating Expenses	46.13%
Operating Profit (Loss)	3.71%
Interest Expense	0.24%
Other Income (Expense)	0.12%
Pretax Profit (Loss)	3.44%

² Common Size Analysis of a financial statement refers to representing each & every item of the financial statement as a percentage (%) of total sales or total revenue. Expressing expenses & income as a % of sales/revenue gives a better understanding of the financial performance of a company.

The following shows the average pretax profit that is earned by a typical “small” company from its total revenue:



A significant portion of this 3% pretax profit made from the revenue is further consumed by income tax & other expenses.

The following chart represents the percentage of firms having a particular range for the pretax profit expressed as a % of total revenue:

FY2007

Pretax Profit as a % of revenue

<1% to **LOSS**

1% to 2%

2% to 5%

5% to 10%

>10%

% of firms

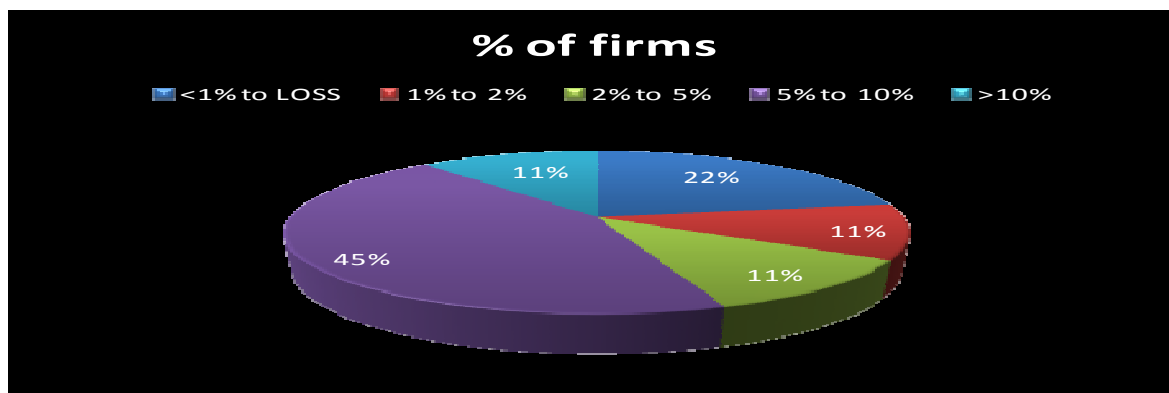
22%

11%

11%

44%

11%



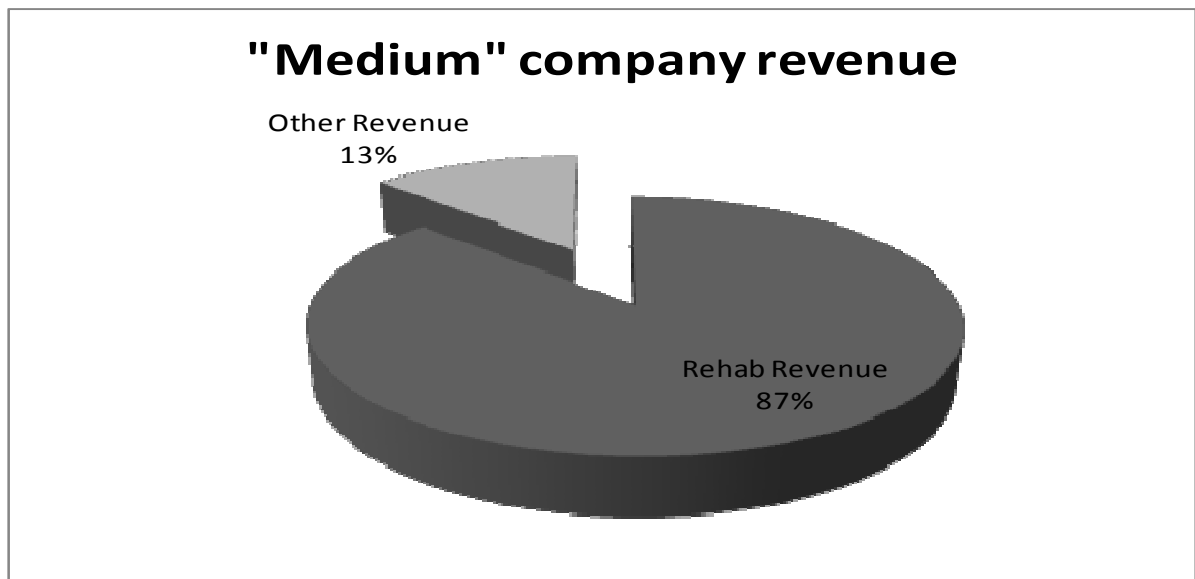
Almost 33% of the firms suffering losses or making negligible profits in the recent financial year.

The table below summarizes the financial results obtained for the “small” sector from the survey (the same results are depicted in the analysis discussed above):

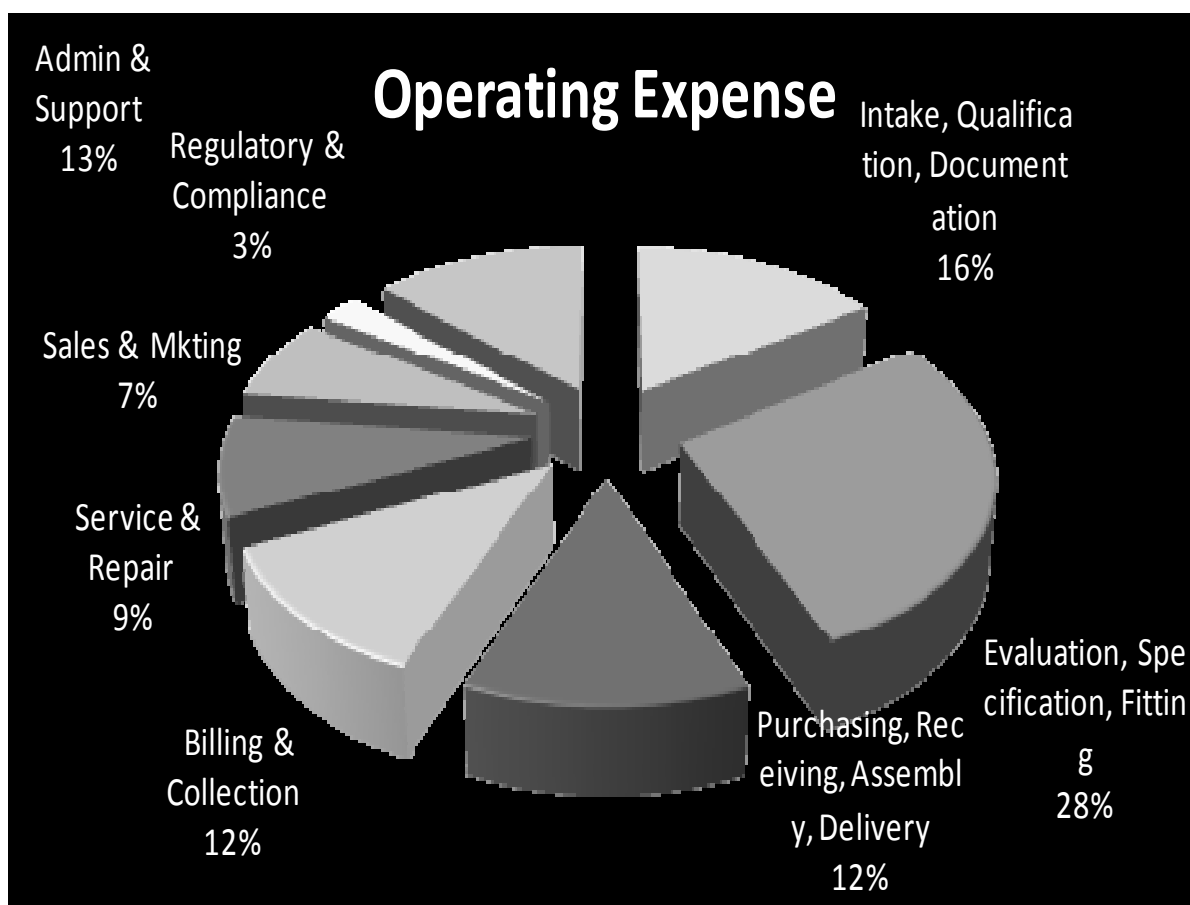
Percentage of companies in this category	53.33%
Percentage of business revenue from rehab	75.42%
Operating Expenses By Function:	
Intake, Qualification, Documentation	11.25%
Evaluation, Specification, Fitting	20.43%
Purchasing, Receiving, Assembly, Delivery	14.20%
Billing & Collection	11.95%
Service & Repair	11.53%
Sales & Mkting	11.40%
Regulatory & Compliance	5.19%
Admin & Support	14.05%
FY2007	
Average Revenue	\$ 2,185,631.68
Average Pretax Profit (Loss)	\$ 67,930.79
Average Common Size Profit (Loss) as a % of revenue	3.44%
Pretax Profit as a % of revenue	% of firms
<1% to LOSS	22%
1% to 2%	11%
2% to 5%	11%
5% to 10%	44%
>10%	11%
Common Size Analysis of I/S (average % of revenue)	
Revenue	100.00%
Cost of Sales	50.16%
Gross Profit	49.84%
Operating Expenses	46.13%
Operating Profit (Loss)	3.71%
Interest Expense	0.24%
Other Income (Expense)	0.12%
Pretax Profit (Loss)	3.44%

ANALYSIS OF THE “MEDIUM” SECTOR

- *Companies with annual revenue of \$5 Million to \$10 Million.*
- *The second most populated sector in the complex rehab industry; 41.67% of the companies in the industry having annual revenue in this range.*
- *An average pretax profit expressed as a percentage of revenue at around 7%. Considerably higher pretax profit than the “small” sector; but in the “medium” sector almost 44% of the firms suffered losses or made negligible profits in 2007 (a percentage even higher than the “small” sector).*
- *On an average, a typical “medium” company earns a very high 87.29% of its revenue from the rehab business annually.*



- *The following represents the average breakup of the operating expense by function based on 2007 financials for the companies belonging to this sector:*

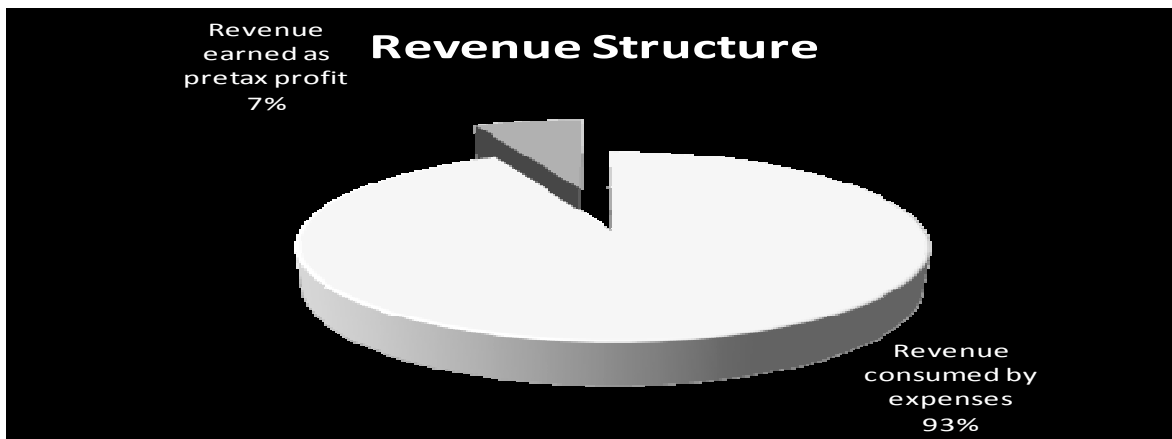


- *The common size analysis of the average income statement (I/S) for 2007 is as follows:*

Common Size Analysis of I/S (average % of revenue)

Revenue	100.00%
Cost of Sales	46.46%
Gross Profit	53.54%
Operating Expenses	45.35%
Operating Profit (Loss)	8.17%
Interest Expense	1.26%
Other Income (Expense)	0.13%
Pretax Profit (Loss)	6.87%

The following shows the average pretax profit that is earned by a typical “medium” company from its total revenue:

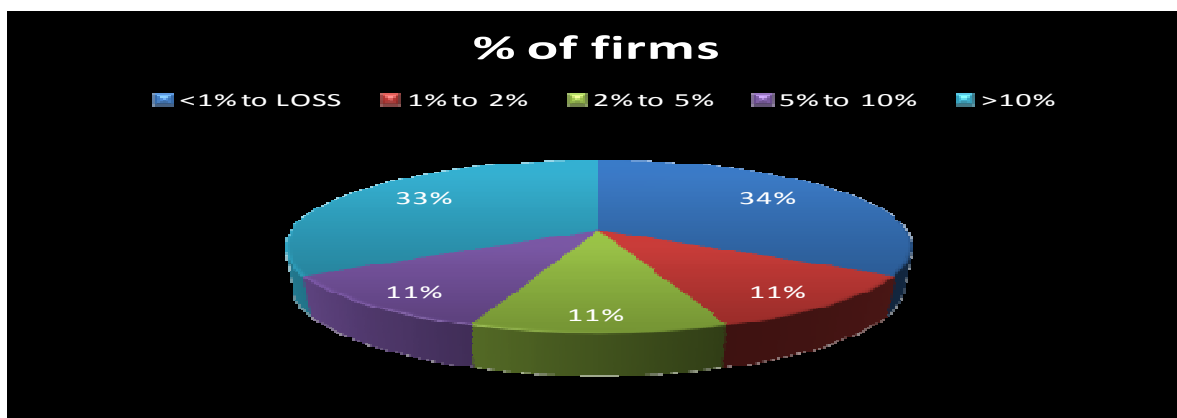


A significant portion of this 7% pretax profit made from the revenue is further consumed by income tax & other expenses.

The following chart represents the percentage of firms having a particular range for the pretax profit expressed as a % of total revenue:

FY2007

Pretax Profit as a % of revenue	% of firms
<1% to LOSS	33%
1% to 2%	11%
2% to 5%	11%
5% to 10%	11%
>10%	33%



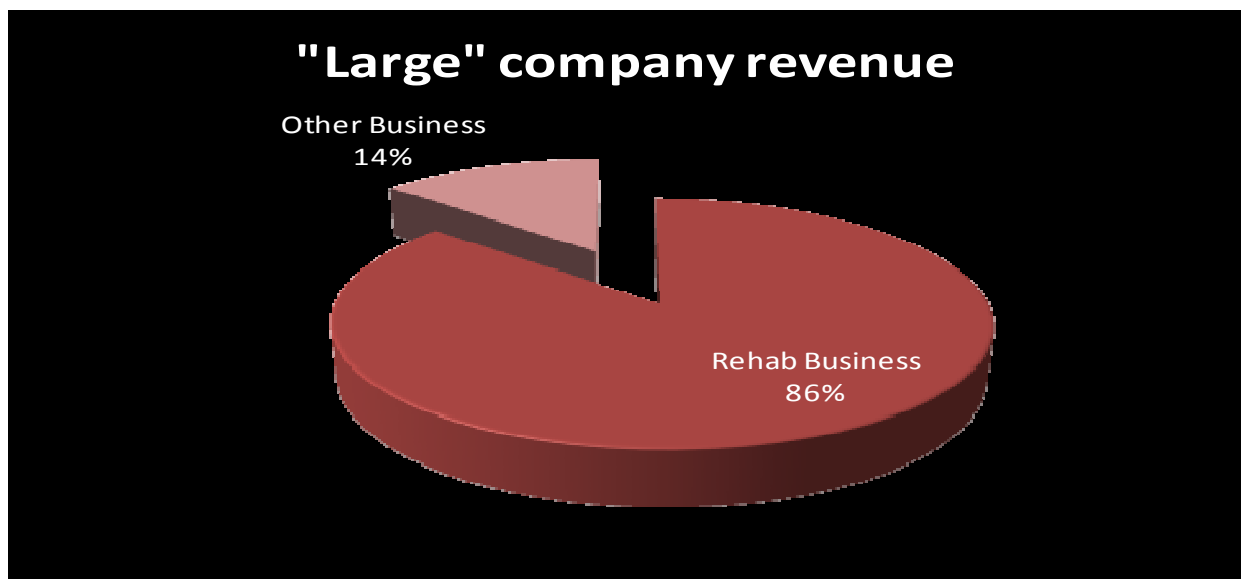
Almost 44% of the firms suffering losses or making negligible profits in the recent financial year.

The table below summarizes the financial results obtained for the “medium” sector from the survey (the same results are depicted in the analysis discussed above):

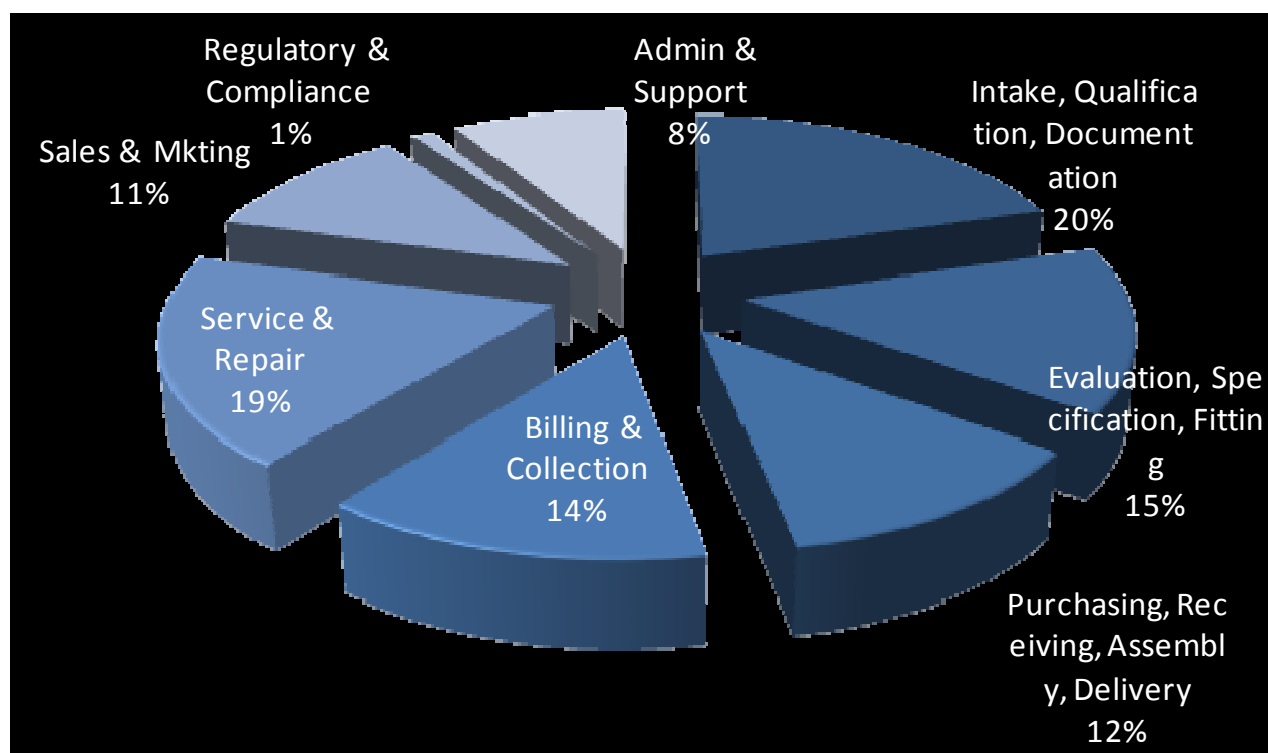
Percentage of companies in this category	41.67%
Percentage of business revenue from rehab	87.29%
Operating Expenses By Function:	
Intake, Qualification, Documentation	15.60%
Evaluation, Specification, Fitting	28.23%
Purchasing, Receiving, Assembly, Delivery	12.46%
Billing & Collection	11.77%
Service & Repair	8.84%
Sales & Mktng	7.47%
Regulatory & Compliance	2.49%
Admin & Support	13.14%
FY2007	
Average Revenue	\$ 7,313,125.78
Average Pretax Profit (Loss)	\$ 434,898.01
Average Common Size Profit (Loss) as a % of revenue	6.87%
Pretax Profit as a % of revenue	% of firms
<1% to LOSS	33%
1% to 2%	11%
2% to 5%	11%
5% to 10%	11%
>10%	33%
Common Size Analysis of I/S (average % of revenue)	
Revenue	100.00%
Cost of Sales	46.46%
Gross Profit	53.54%
Operating Expenses	45.35%
Operating Profit (Loss)	8.17%
Interest Expense	1.26%
Other Income (Expense)	0.13%
Pretax Profit (Loss)	6.87%

ANALYSIS OF THE “LARGE” SECTOR

- *Companies with annual revenue in excess of \$10 Million.*
- *The least populated sector with just 5% of the complex rehab equipment suppliers having revenue in excess of \$10 Million.*
- *A considerably weak performance amongst “large” companies as well; with 33% of the companies nearing losses with extremely low profits last year. Further, an average pretax profit of 4%-5% expressed as a percentage of revenue – which is significantly low for a \$10 Million enterprise.*
- *A typical large company having 86.50% of its revenue coming from the rehab business.*



- *The following represents the average breakup of the operating expense by function based on 2007 financials for the companies belonging to this sector:*

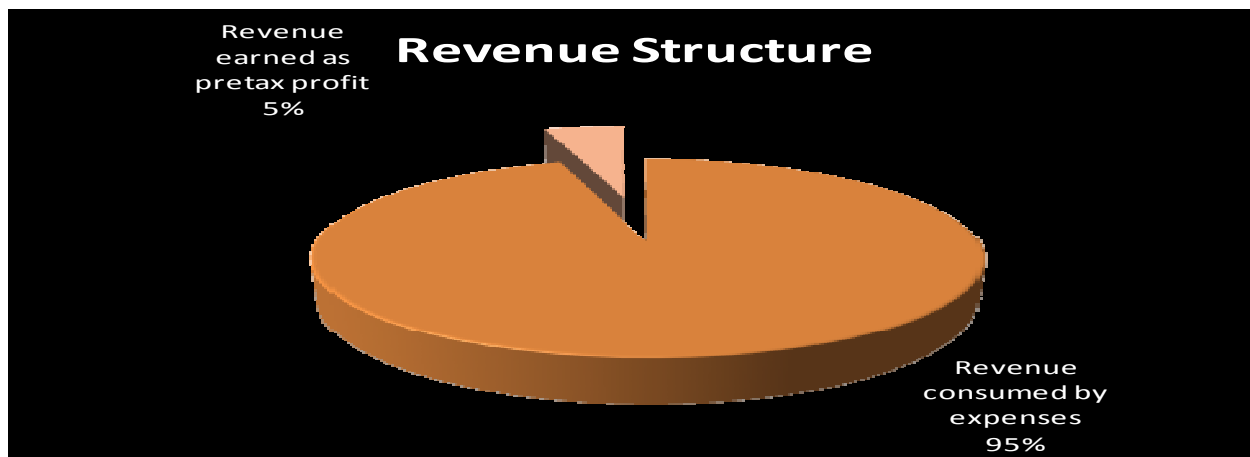


- *The common size analysis of the average income statement (I/S) for 2007 is as follows:*

Common Size Analysis of I/S (average % of revenue)

Revenue	100.00%
Cost of Sales	47.79%
Gross Profit	52.21%
Operating Expenses	46.63%
Operating Profit (Loss)	5.58%
Interest Expense	0.50%
Other Income (Expense)	-0.08%
Pretax Profit (Loss)	4.83%

The following shows the average pretax profit that is earned by a typical “large” company from its total revenue:

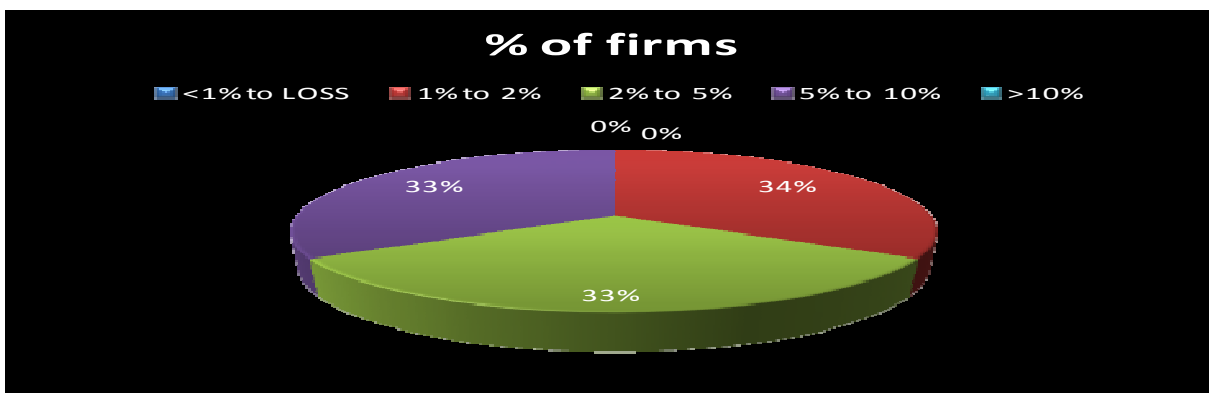


A significant portion of this 5% pretax profit made from the revenue is further consumed by income tax & other expenses.

The following chart represents the percentage of firms having a particular range for the pretax profit expressed as a % of total revenue:

FY2007

Pretax Profit as a % of revenue	% of firms
<1% to LOSS	0%
1% to 2%	33%
2% to 5%	33%
5% to 10%	33%
>10%	0%



Almost 34% of the firms making negligible profits in the recent financial year.

The table below summarizes the financial results obtained for the “large” sector from the survey (the same results are depicted in the analysis discussed above):

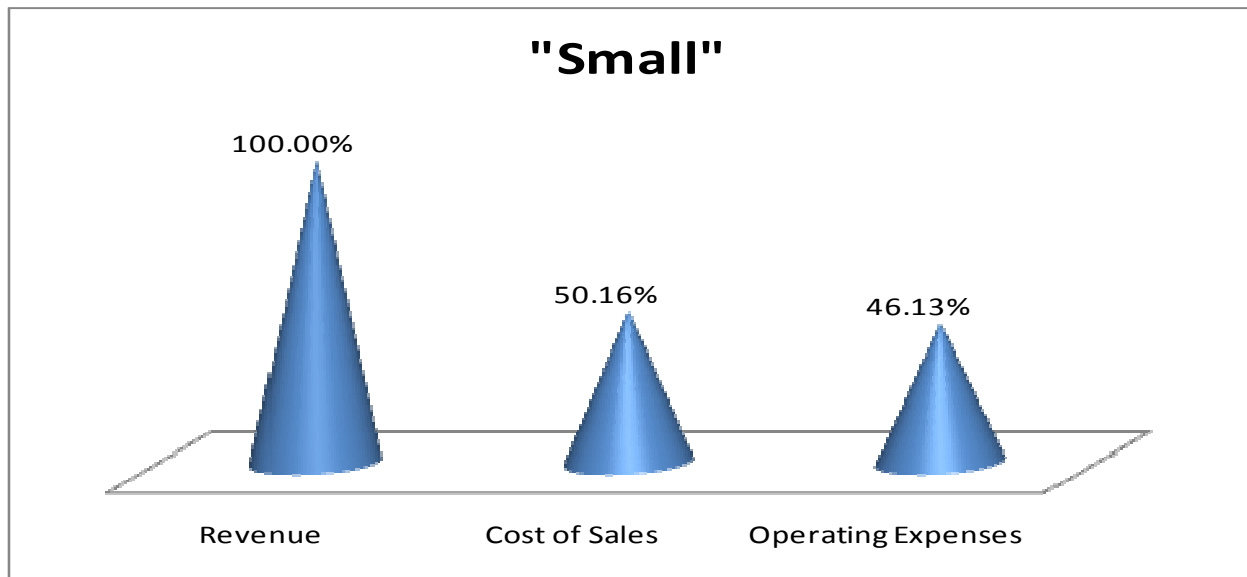
Percentage of companies in this category	5.00%
Percentage of business revenue from rehab	86.50%
Operating Expenses By Function:	
Intake, Qualification, Documentation	20.24%
Evaluation, Specification, Fitting	14.95%
Purchasing, Receiving, Assembly, Delivery	11.85%
Billing & Collection	13.64%
Service & Repair	18.85%
Sales & Mktng	10.89%
Regulatory & Compliance	1.00%
Admin & Support	8.63%
FY2007	
Average Revenue	\$ 20,668,909.50
Average Pretax Profit (Loss)	\$ 977,421.00
Average Common Size Profit (Loss) as a % of revenue	4.83%
Pretax Profit as a % of revenue	% of firms
<1% to LOSS	0%
1% to 2%	33%
2% to 5%	33%
5% to 10%	33%
>10%	0%
Common Size Analysis of I/S (average % of revenue)	
Revenue	100.00%
Cost of Sales	47.79%
Gross Profit	52.21%
Operating Expenses	46.63%
Operating Profit (Loss)	5.58%
Interest Expense	0.50%
Other Income (Expense)	-0.08%
Pretax Profit (Loss)	4.83%

SOME VALUABLE CONCLUSIONS

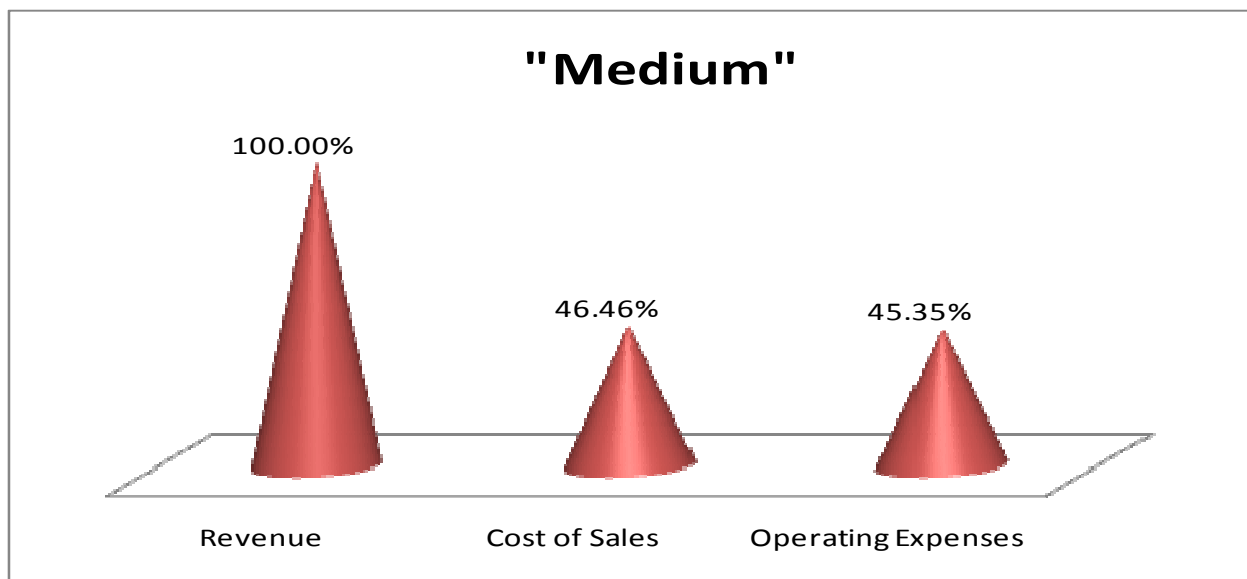
A HIGH EXPENSE INDUSTRY!

The above analysis clearly shows the high amount of expenses & costs associated with the complex rehab industry. Observing the common size income statement values derived from the average of the financials for 2007 for the various companies; we can clearly see that *cost of sales* & *operating expenses* are a significantly high percentage of the total revenue for each sector.

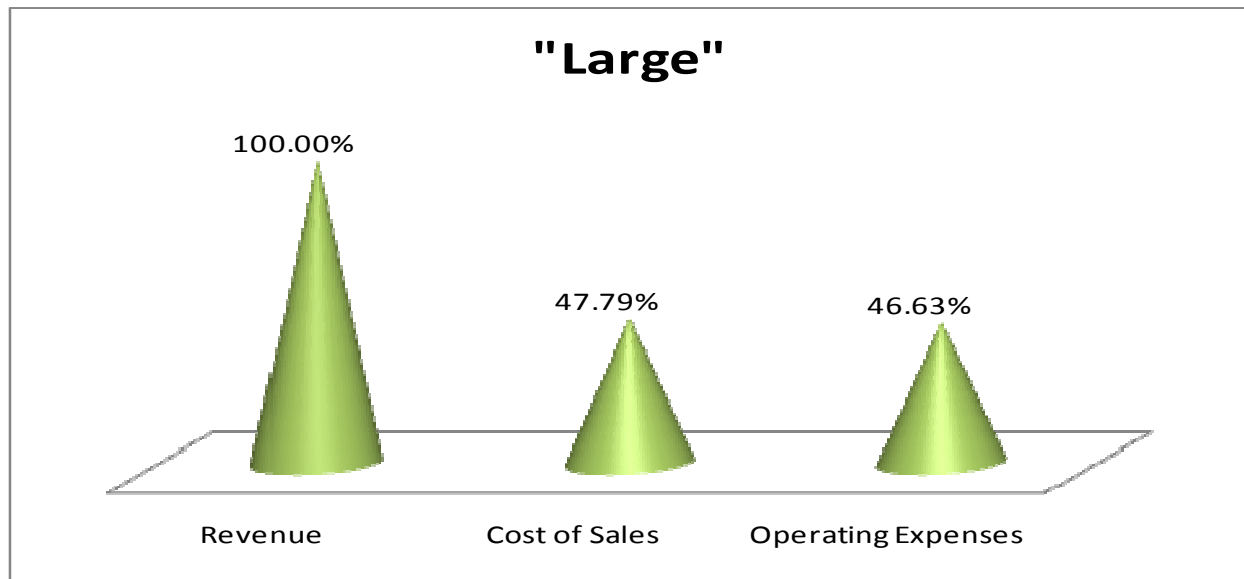
For the “small” sector:



For the “medium” sector:



For the “large” sector:



Comment:

It is clearly observed that all the sectors have almost their **entire “annual revenue” being consumed in paying for the “cost of sales” & “operating expenses”**. This leaves an almost **“negligibly small revenue” left as the “net income”** for a company once the income taxes, interest expenses & other expenses are taken into account. Hence, the reason for the **low profitability of the complex rehab industry** is clearly explained here.

This expense/revenue model is synonymous to the **“airline industry”** where the profitability is kept extremely low on account of the high costs & expenses involved in operating an airline company (fleets, pilots, stewards, staff, logistics & **fuel**).

However, there is no such erratic expense (like fuel) involved in operating a typical complex rehab company. There is a **clear need for measures** that help to balance the expense/revenue equation in case of the complex rehab industry to improve the profitability of the companies belonging to the industry. Under such a low profitability it is extremely hard to forecast the future financial performance of the industry; because the **threat of more & more firms exiting the industry becomes stronger as profitability goes lower**.

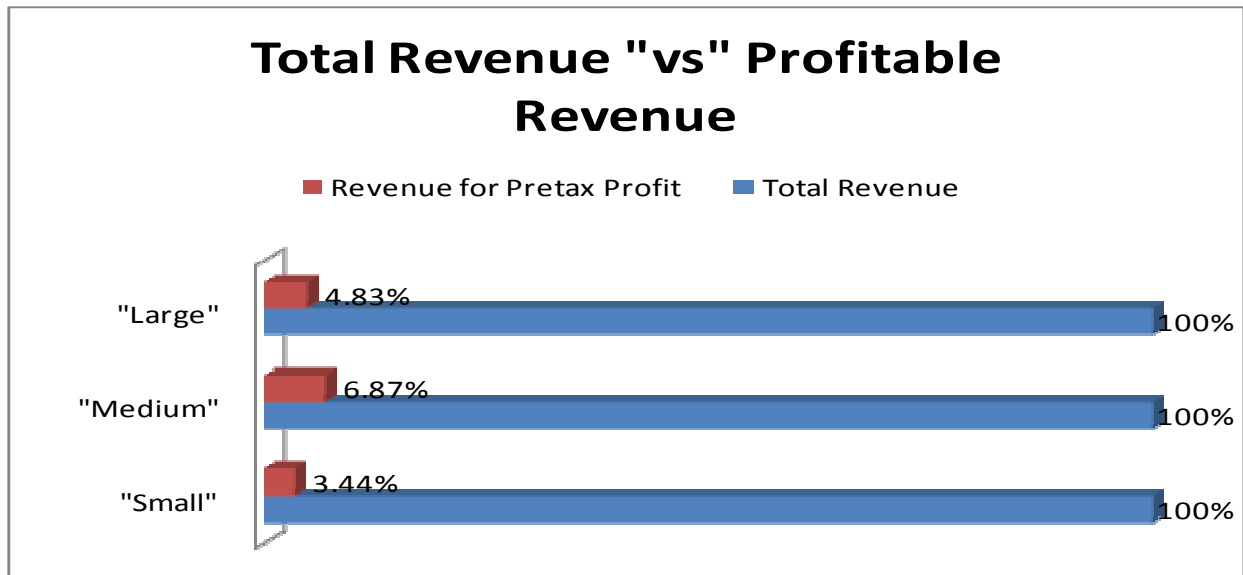
COMPLEX REHAB INDUSTRY:

NEXT TO NEGLIGIBLE PRETAX PROFITS

WHAT IS DRIVING IT THEN?

Observing the pretax profits expressed as a percentage of revenue (common size profits) for all the three sectors:

	Total Revenue	Revenue for Pretax Profit
"Small"	100%	3.44%
"Medium"	100%	6.87%
"Large"	100%	4.83%



We can clearly observe that all the sectors in the complex rehab industry are experiencing extremely low pretax profits. The net profit (net income) can be considered next to negligible once the effects of income taxes & other tax/interest related expenses are taken into consideration in computing them from the pretax figures shown in our analysis/survey. These results are shocking since it is hard to imagine what drives these companies under such low levels of profitability?

Further, even from a macroeconomic standpoint – this is not a healthy environment since most of the small to large companies in this industry are sources of employment, services & revenue to the nation. Also, this is a cause driven industry which serves the needs of thousands of disabled people in the need of rehabilitation. An industry like this being struck by a financial crisis could further have detrimental microeconomic & macroeconomic effects as a whole.

Appendix A3 – Article

The Journey to Matt's Mobility



1. Matt's initial evaluation at the rehab hospital took place on September 2, 2003. The evaluation consisted of measurements, evaluation of his medical condition and assessment of seating and mobility options based on his home environment and physical needs. In addition, pressure mapping also was completed to evaluate the location of increased pressure areas and the amount of pressure on his current bed sore. This evaluation took over two hours of non-billable time by the CRTS. It was determined that Matt needed a power wheelchair with a power tilt and recline system with custom seating.

2. While waiting for prior authorization from his primary private insurance and Medicaid, his family had to purchase a reclining back wheelchair, out-of-pocket, to enable Matt to go home. Another evaluation was completed- another hour of non-

billable time by the CRTS. This manual wheelchair and wheelchair cushion had to be rushed as his discharge date was set and could not be changed unless he had a complication. This manual wheelchair meant that Matt would be able to go home but he would not have any independence while he waited for his power wheelchair.

3. After he got home, it was determined that the recliner wheelchair his family paid for was not meeting his needs, and causing further friction and shearing on his skin. This friction and shearing causes bed sores. The CRTS bought a loaner (non-billable) tilt-in-space wheelchair to enable Matt to have position changes but not cause further damage to his skin from friction and shearing. This temporary chair had to be specifically configured for Matt's needs: trough arms for positioning; headrest for head support; chest belt for upper trunk control; and a contoured back to support his trunk for optimum breathing, comfort, and digestion. The loaner wheelchair configured for Matt was provided at no charge since insurance only pays for one wheelchair. All the evaluation and assembly time is non-billable. Approximately ten hours was spent to get Matt's loaner wheelchair configured and delivered to his home.
4. After he was in his loaner wheelchair the CRTS then needed to return to the home to re-adjust the headrest. This was non-billable time.
5. On December 18, 2003, Matt's power wheelchair was ready for delivery to his home. The delivery with training and adjustments took over two hours of non-billable time. Assembly of the power wheelchair to Matt's specifications took over six hours.
6. A few days later the CRTS received a call that Matt was unable to tolerate the wheelchair back and lateral support on his new power wheelchair. The rehab technician went to the home with the loaner wheelchair as a back up. Suggestions on altering the back of the power wheelchair did not work and Matt's family contacted the CRTS that evening for further evaluation.
7. On December 24, 2003, the CRTS went to the home for additional evaluation of the seating and Matt's position. It was determined that Matt would need the back he used while in rehab – a more contoured back to support his trunk and allow him to sit with greater comfort. Measurements were completed. Matt returned to the loaner wheelchair since his power wheelchair needed to return to the production shop for modifications to accommodate the new back. There was more than eight hours of non-billable time spent for re-evaluation, production/modification and re-delivery.

"Approximately 10 hours of non-billable time was spent to get Matt's loaner wheelchair configured and delivered to his home."

Non-Billable Time Overview

Initial Evaluation by CRTS = 2 hrs

Evaluation for loaner wheelchair to get Matt home = 1 hr

Configuration of loaner tilt-in-space chair and delivery = 10 hrs

Re-Adjust headrest = 1 hr

Delivery and adjustment of Matt's powerchair = 2 hrs

Assembly of Matt's powerchair to his specifications = 6 hrs

Follow up due to Matt's inability to tolerate back and supports = 1.5 hrs

Re-evaluation, modification and re-delivery of powerchair = 8 hrs

Funding, purchasing, payables and receiving admin time = 7 hrs

Total Non-Billable Time = 38.5 hrs

Appendix A4 – Complex Equipment Specification

Refer following pages

Invacare® Formula™ CG Tilt/Recline for Storm Series® Bases

Distributor Wholesale Price List and Order Form

Effective October 9, 2006 - Revised April 9, 2007

For ease of ordering, contact Customer Service

Phone 02-8839-5333, Fax: 02-8839-5311

www.invacare.com.a

Prices in AUD Ex freight (Note: All accessory prices apply to whole chair purchases. Please use spare parts prices for separate accessory orders)



Yes, you can.®

Company Name _____ Account # _____

Phone # _____ P.O.# _____ Date _____

Ship To Name & Address _____

Special Note

Prices are approximate retail prices. Subject to dealer delivery charges, other local charges and change without notice.
For exact prices please contact your Invacare Distributor. Phone Invacare on 1800 460 460 for your Invacare Distributor's contact details.

Base

CHAIR TYPE/POWERED SEATING BASE

- ☐ 3GAR-CG Arrow for Formula_{CG} with MK6i™ (K0884)6,993.00
- ☐ 3GRX-CG Ranger X for Formula_{CG} with MK6i (K0862)5,285.00
- ☐ 3GTQ-CG Torque SP for Formula_{CG} with MK6i (K0884)4,830.00

TRANSPORT TIE DOWN

- ¹ ☐ TRBKTS Wheelchair Transport Brackets175.00

*Transport Tie-Down

TRBKTS includes four factory-installed wheelchair transport brackets. TRBKTS has not been crash-tested in accordance with WC19. Use these transport brackets only to secure an unoccupied wheelchair during transport.

As of this date, the Department of Transportation has not approved any tie-down systems for transportation of a user while in a wheelchair, in a moving vehicle of any type. It is Invacare's position that users of wheelchairs should be transferred into appropriate seating in vehicles for transportation and use be made of the restraints made available by the auto industry. Invacare cannot and does not recommend any wheelchair transportation systems.

*Transport Tie-Down option is not retrofittable to existing models and is not field serviceable.

USER WEIGHT LIMITS

ARROW

- ² ☐ U300 User Weight <300 lbs.No Charge
- ³ ☐ U400 User Weight <400 lbs.No Charge

RANGER X

- ³ ☐ U400 User Weight <400 lbs.No Charge

TORQUE SP

- ² ☐ U300 User Weight <300 lbs.No Charge

TRUETRACK UPGRADE

- ⁴ ☐ TRUTK True Track Upgrade2,390.00

⁵ VENT TRAYS

- ☐ VENT Articulating Vent Tray (E1030)1,225.00

FRAME TYPE

- ⁶ ☐ SFS Short BaseNo Charge
- ☐ LFS Long BaseNo Charge

CASTER OPTIONS

- ☐ I259 6" X 2" Semi Pneumatic CastersNo Charge
- ☐ I228-3 8" X 2.25" Semi Pneumatic Casters Lt. Grey..**Standard**
- ☐ I251-3 8" X 2" Pneumatic CastersNo Charge
- ⁷ ☐ I220-3 9" X 2.75" Pneumatic CastersNo Charge
- ⁷ ☐ I465-3 9" X 2.75" Foam Filled CastersNo Charge

CASTER SUSPENSION

- ⁸ ☐ 9213-6 Shock Fork for 6" Casters (E1016)112.00
- ☐ 9213-8 Shock Fork for 8" Casters (E1016)112.00

WHEEL OPTIONS

- ☐ I430-3 14" X 3" Pneumatic Tires**Standard**
- ☐ I431-3 14" X 3" Tires w/Foam Filled Inserts70.00
- ⁹ ☐ I440 14" X 4" Pneumatic Tires55.00
- ⁹ ☐ I441 14" X 4" Tires w/Foam Filled Inserts125.00

¹⁰ FREE WHEEL HUB

- ☐ FHUB Free Wheel Hub88.00

FOOTNOTES

1. Only Available with MED or TALL Seat to Floor Height.
2. With 300 lb. weight capacity, maximum range of tilt is 55 degrees.
3. With 400 lb. weight capacity, maximum range of tilt is 45 degrees.
4. TrueTrack driving technology, which enables driver to track straighter regardless of the terrain, includes Monroe® spring shock suspension, and 7 MPH top speed. Must also select MK6TT Controller.
5. Vent tray on chair reduces chair weight capacity by approximately 50 lbs. Not available with TRBKTS.
6. Not available with seat depths 19"-22". Must pick long base.
7. Not available with short base.
8. Not available with 9" casters.
9. 14" x 4" wheels increase the overall width of the base by 2.5". Does not include Storm Series design wheel or fender. Not available with (TRUTK) True Track Upgrade.
10. Will add .75" overall width. Not available with TrueTrack Upgrade (TRUTK). Does not include Storm Series design wheel or fender.

NOTE: All specifications and dimensions are approximate.

Invacare® Formula™ CG Tilt/Recline

Accessories and Options

Base

FRAME FINISH

CONTEMPORARY

- | | | |
|-------------------------------|----------------------|-----------|
| <input type="checkbox"/> 24P | Wet Black | No Charge |
| <input type="checkbox"/> 60P | Silver Metallic..... | No Charge |
| <input type="checkbox"/> 71P | Silver Vein..... | No Charge |
| <input type="checkbox"/> 105P | Midnight Blue..... | No Charge |
| <input type="checkbox"/> 115P | Black Prism..... | No Charge |

TOO HOT

- | | | |
|-------------------------------|---------------------|-----------|
| <input type="checkbox"/> 30P | Sunny Yellow..... | No Charge |
| <input type="checkbox"/> 61P | Electric Red..... | No Charge |
| <input type="checkbox"/> 119P | Bubblegum Pink..... | No Charge |
| <input type="checkbox"/> 120P | Grape Madness..... | No Charge |

FRAME FINISH (CONTINUED)

WAY COOL

- | | | |
|-------------------------------|-------------------------|-----------|
| <input type="checkbox"/> 62P | Electric Blue | No Charge |
| <input type="checkbox"/> 104P | Electric Teal..... | No Charge |
| <input type="checkbox"/> 121P | Lolly Pop Blue..... | No Charge |
| <input type="checkbox"/> 122P | Cosmic Blue..... | No Charge |
| <input type="checkbox"/> 125P | Emerald Green | No Charge |
| <input type="checkbox"/> 127P | Grasshopper Green | No Charge |

Seat

SYSTEM TYPE

- | | | |
|-------------------------------|---|----------|
| <input type="checkbox"/> CGTR | Tilt & Recl. w/Mechanical Shear Reduction (E1007) ... | 2,520.00 |
|-------------------------------|---|----------|

SEAT-TO-FLOOR HEIGHT

- | | | |
|---|--------------|-----------|
| ¹ <input type="checkbox"/> LOW | 17.75" | No Charge |
| <input type="checkbox"/> MED | 18.75" | No Charge |
| <input type="checkbox"/> TALL | 19.75" | No Charge |

SEAT SELECTION

- | | | |
|---|------------------------|------------|
| ² <input type="checkbox"/> CTS | Contoura™ Seating..... | 315.00 |
| <input type="checkbox"/> CNB | Conventional Back..... | No Charge |
| <input type="checkbox"/> OMCU | Omit Cushion..... | Less 15.00 |

³ PUSH HANDLES

- | | | |
|-------------------------------|------------------------------------|-----------|
| <input type="checkbox"/> PCNB | Push Handles for Conventional..... | No Charge |
|-------------------------------|------------------------------------|-----------|

SEAT WIDTH RANGE

- | | | |
|--------------------------------|------------------------------------|-----------|
| <input type="checkbox"/> 1620W | 16" to 20" Width (Adjustable)..... | No Charge |
| <input type="checkbox"/> 2024W | 20" to 24" Width (Adjustable)..... | No Charge |

SEAT WIDTH SETTING

- | | | |
|---|---|-----------|
| <input type="checkbox"/> W16 | 16" Seat Width | No Charge |
| <input type="checkbox"/> W17 | 17" Seat Width (not available w/Contoura) ... | No Charge |
| <input type="checkbox"/> W18 | 18" Seat Width | No Charge |
| <input type="checkbox"/> W19 | 19" Seat Width (not available w/Contoura) ... | No Charge |
| <input type="checkbox"/> W20 | 20" Seat Width | No Charge |
| <input type="checkbox"/> W21 | 21" Seat Width (not available w/Contoura) ... | No Charge |
| <input type="checkbox"/> W22 | 22" Seat Width | No Charge |
| ⁴ <input type="checkbox"/> W23 | 23" Seat Width (not available w/Contoura) ... | No Charge |
| ⁴ <input type="checkbox"/> W24 | 24" Seat Width | No Charge |

ADJUSTABLE SEAT DEPTH RANGE

CONVENTIONAL/CONTOURA

- | | | |
|--------------------------------|-----------------------------------|-----------|
| <input type="checkbox"/> 1619D | 16" to 19" Deep (Adjustable)..... | No Charge |
| <input type="checkbox"/> 1922D | 19" to 22" Deep (Adjustable)..... | No Charge |

CONVENTIONAL & CONTOURA

SEAT DEPTH SETTING

- | | | |
|------------------------------|----------------------|-----------|
| <input type="checkbox"/> D16 | 16" Seat Depth | No Charge |
| <input type="checkbox"/> D17 | 17" Seat Depth | No Charge |
| <input type="checkbox"/> D18 | 18" Seat Depth | No Charge |
| <input type="checkbox"/> D19 | 19" Seat Depth | No Charge |
| <input type="checkbox"/> D20 | 20" Seat Depth | No Charge |
| <input type="checkbox"/> D21 | 21" Seat Depth | No Charge |
| <input type="checkbox"/> D22 | 22" Seat Depth | No Charge |

SEAT TILT

- | | | |
|------------------------------|----------|-----------|
| <input type="checkbox"/> 0SA | 0° | Standard |
| <input type="checkbox"/> 5SA | 5° | No Charge |

FOOTNOTES

1. Not available with Transport Tie Down option.
2. Selected Seat Depth on Contoura assumes 1" of back cushion compression. For example: When choosing an 18" depth the measurement from the front of the back cushion to the front of the seat pan equals 17". The Contoura back cushion is 2" thick includes leatherette seat cushion.
3. Push handles will add an additional 3.5" to back cane height.
4. Available only with 400 lb. package.

NOTE: All specifications and dimensions are approximate.

Invacare® Formula™ CG Tilt/Recline
Accessories and Options

Seat

BACK HEIGHT

CONVENTIONAL BACK

- | | | | |
|--------------------------|--------|----------------------|-----------|
| <input type="checkbox"/> | TSBH20 | Back Height 20"..... | No Charge |
| <input type="checkbox"/> | TSBH21 | Back Height 21"..... | No Charge |
| <input type="checkbox"/> | TSBH22 | Back Height 22"..... | No Charge |
| <input type="checkbox"/> | TSBH23 | Back Height 23"..... | No Charge |
| <input type="checkbox"/> | TSBH24 | Back Height 24"..... | No Charge |
| <input type="checkbox"/> | TSBH25 | Back Height 25"..... | No Charge |
| <input type="checkbox"/> | TSBH26 | Back Height 26"..... | No Charge |

CONTOURA

- | | | | |
|--------------------------|---------|------------------------|-----------|
| <input type="checkbox"/> | TSBH25 | Back Height 25"..... | No Charge |
| <input type="checkbox"/> | TSBH295 | Back Height 29.5"..... | No Charge |

HEADREST TYPE (OPTIONAL)

- | | | | |
|--------------------------|-------------|--|----------|
| <input type="checkbox"/> | TAR127700 | Curved Headrest (E0955)..... | 364.00 |
| <input type="checkbox"/> | TAR27700HW | Removable & Adjustable Hardware (E1028)..... | Included |
| <input type="checkbox"/> | TAR128000 | Two-Step Headrest (E0955)..... | 364.00 |
| <input type="checkbox"/> | TAR128000HW | Removable & Adjustable Hardware (E1028)..... | Included |
| <input type="checkbox"/> | T0022400 | Large Headrest (E0955)..... | 364.00 |
| <input type="checkbox"/> | TAR22400HW | Removable & Adjustable Hardware (E1028)..... | Included |
| <input type="checkbox"/> | T0022600 | Small Headrest (E0955)..... | 364.00 |
| <input type="checkbox"/> | TAR22600HW | Removable & Adjustable Hardware (E1028)..... | Included |

STEALTH HEADRESTS

- | | | | |
|--------------------------|---------|--|----------|
| <input type="checkbox"/> | CP175 | 14" Multi Axis Headrest (E0955)..... | 347.00 |
| <input type="checkbox"/> | CP175HW | Removable & Adjustable Hardware (E1028)..... | Included |
| <input type="checkbox"/> | CP275 | 10" Multi Axis Headrest (E0955)..... | 347.00 |
| <input type="checkbox"/> | CP275HW | Removable & Adjustable Hardware (E1028)..... | Included |
| <input type="checkbox"/> | CP180 | 14" TWB Headrest (E0955)..... | 417.00 |
| <input type="checkbox"/> | CP180HW | Removable & Adjustable Hardware (E1028)..... | Included |
| <input type="checkbox"/> | CP280 | 10" TWB Headrest (E0955)..... | 417.00 |
| <input type="checkbox"/> | CP280HW | Removable & Adjustable Hardware (E1028)..... | Included |

ARM TYPE (PAIR)

- | | | | |
|--------------------------|--------|--|-----------|
| <input type="checkbox"/> | RA19FL | Reclining Full Length Adj. Hgt. - Left..... | No Charge |
| <input type="checkbox"/> | RA19FR | Reclining Full Length Adj. Hgt. - Right..... | No Charge |
| <input type="checkbox"/> | RA29FL | Reclining Desk Length Adj. Hgt. - Left..... | No Charge |
| <input type="checkbox"/> | RA29FR | Reclining Desk Length Adj. Hgt. - Right..... | No Charge |

OTTO BOCK™ ARM PADS (PAIR)

- | | | | |
|--------------------------|---------|--|--------|
| <input type="checkbox"/> | OB20400 | One Piece Channel Armpads (E2209)..... | 203.00 |
| <input type="checkbox"/> | OB20500 | Large Forearm Pads..... | 203.00 |
| <input type="checkbox"/> | OB20600 | Medium Forearm Pads..... | 203.00 |
| <input type="checkbox"/> | OB20700 | Small Forearm Pads..... | 203.00 |

OTTO BOCK HAND PADS (PAIR)

- | | | | |
|--------------------------|---------|----------------------------|-------|
| <input type="checkbox"/> | OB23000 | Large Flat Hand Pads..... | 88.00 |
| <input type="checkbox"/> | OB23300 | Medium Flat Hand Pads..... | 88.00 |

LATERALS (PAIR)

² CONVENTIONAL BACK

- | | | | |
|--------------------------|---------|--|----------|
| <input type="checkbox"/> | TMSLM | Swingaway Laterals Medium (E0956)..... | 364.00 |
| <input type="checkbox"/> | TMSLMHW | Removable & Adjustable Hardware (E1028)..... | Included |
| <input type="checkbox"/> | TMSLL | Swingaway Laterals Large (E0956)..... | 364.00 |
| <input type="checkbox"/> | TMSLLHW | Removable & Adjustable Hardware (E1028)..... | Included |

² STEALTH LATERALS FOR CONVENTIONAL BACK

- | | | | |
|--------------------------|----------|--|----------|
| <input type="checkbox"/> | TWB-TPR | Adj. Swing Channel Lat. Med (E0956)..... | 532.00 |
| <input type="checkbox"/> | TPRHW | Removable & Adjustable Hardware (E1028)..... | Included |
| <input type="checkbox"/> | TWB-TPRL | Adj. Swing Channel Lat. Lg (E0956)..... | 532.00 |
| <input type="checkbox"/> | TPRLHW | Removable & Adjustable Hardware (E1028)..... | Included |

³ CONTOURA SEATING

- | | | | |
|--------------------------|--------|--|----------|
| <input type="checkbox"/> | CSLM | Swingaway Contoura Lat. Med (E0956)..... | 364.00 |
| <input type="checkbox"/> | CSLMHW | Removable & Adjustable Hardware (E1028)..... | Included |
| <input type="checkbox"/> | CSLL | Swingaway Contoura Lat. Lg (E0956)..... | 364.00 |
| <input type="checkbox"/> | CSLLHW | Removable & Adjustable Hardware (E1028)..... | Included |

³ STEALTH LATERALS FOR CONTOURA

- | | | | |
|--------------------------|----------|--|----------|
| <input type="checkbox"/> | TWB-CPR | Adj. Swing Contoura Lat. Med (E0956)..... | 532.00 |
| <input type="checkbox"/> | CPRHW | Removable & Adjustable Hardware (E1028)..... | Included |
| <input type="checkbox"/> | TWB-CPRL | Adj. Swing Contoura Lat. Lg. (E0956)..... | 532.00 |
| <input type="checkbox"/> | CPRLHW | Removable & Adjustable Hardware (E1028)..... | Included |

SEAT POSITIONING STRAPS

- | | | | |
|--------------------------|--------|--|-----------------|
| <input type="checkbox"/> | I31IBK | Airline Buckle Seat Pos. Strap..... | 42.00 |
| <input type="checkbox"/> | I515 | Push Button Style Seat Pos. Strap..... | Standard |

CHEST POSITIONING STRAPS

- | | | | |
|--------------------------|--------|---|-------|
| <input type="checkbox"/> | 731IBK | Airline Buckle Chest Pos. Strap (E0960)..... | 88.00 |
| <input type="checkbox"/> | 9515 | Push Button Style Chest Pos. Strap (E0960)..... | 88.00 |
| <input type="checkbox"/> | 732IBK | Hook & Loop Chest Pos. Strap (E0960)..... | 88.00 |

FOOTNOTES

1. Not compatible with quadlink retractable joystick mount.
2. For use with channel canes only.
3. For use with Contoura seating only.

NOTE: All specifications and dimensions are approximate.

Invacare® Formula™ CG Tilt/Recline

Accessories and Options

Electronics

MK6i™ CONTROL

TORQUE SP, RANGER X

- ☐ MK690ACC Controller with Actuator ControlStandard
- ☐ MK6TT True Track ControllerNo Charge

ARROW

- ☐ MK6TT True Track ControllerStandard

EXPANDABLE CONTROLLER SYSTEMS

- ☐ MPJM6 MPJ™+ Multiple Drive Joystick (E2377).....Standard
- ² ☐ PSFM6 Personal Joystick, Inductive on Front (E2399).....No Charge
- ² ☐ PSRM6 Personal Joystick, Inductive on Rear (E2399).....No Charge
- ⁴ ☐ PBOD Push Button On/Off w/PB Drive Select.....No Charge
- ^{3,4} ☐ PBSS Push Button On/Off w/Speed Select.....No Charge
- ⁴ ☐ OR On/Off Mounted Right.....No Charge
- ⁴ ☐ OL On/Off Mounted Left.....No Charge
- ⁵ ☐ ASLRDYM6 MK6 Display Only
(No Driver Control) (E2377).....No Charge

**FOR YOUR ASL DRIVE SYSTEM NEEDS
PLEASE REFER TO THE FOLLOWING:
ASL SINGLE INVOICE PRICE LIST FORM # 02-097.**

- ☐ I500M6 Prop RIM Control Head Control w/Display (E2327).....1,197.00
- ☐ SMHD Small Headrest.....No Charge
- ☐ LGHD Large Headrest.....No Charge
- ☐ I558MM6 Compact Joystick w/Display (E2373)441.00

ALTERNATIVE DIGITAL CONTROL SYSTEMS

- ⁶ ☐ SNPM6 Sip-N-Puff/Digital Interface Box (E2325).....770.00
- ⁶ ☐ 5018M6 Wafer Board & Digital Interface Box (E2322)805.00
- ⁶ ☐ 5020M6 Mini Tash Joystick & Digital Interface Box (E2321).....945.00

SIP N PUFF KIT

- ☐ PKG32666 Therafin® Sip-N-Puff Breath Tube Kit (E2326).....112.00

ADDITIONAL CONTROL CHOICES

- ☐ I558M6 Compact Joystick - Less Std Mount441.00
- ⁷ ☐ 5018 Wafer Board.....315.00
- ⁷ ☐ 5020 Mini Tash Joystick.....350.00
- ☐ PACM6 Proportional Attendant Control525.00
- ⁷ ☐ I552M Digital Attendant Control525.00

JOYSTICK MOUNTING HARDWARE

- ⁸ ☐ QLAM6 Quad Link Retract. Joystick Mnt MPJ+ (E1028).....245.00
- ☐ ARM250 Stealth Height Adjustable Joystick Mount (E1028) ..189.00
- ☐ LEFT Left Handed Mounted Joystick.....No Charge
- ☐ RIMHW RIM Hardware For I500 (E1028)193.00
- ☐ PKG32669 Complete Bib Assembly (Tash/I558)231.00
- ☐ GATMPJ6 Gatlin Midline for MPJ (E1028)525.00
- ☐ GAT1812 Gatlin Midline for 1812 (E1028)525.00
- ☐ RCM Rear Cane Mount for Compact Joystick.....357.00

ELECTRONIC ACCESSORIES

- ☐ I813M6 MK6i Programmer w/Pro Memory Card.....305.00
- ☐ I813SD Pro Memory Card (USB Ready).....77.00
- ☐ I560 "T" Handle Flexible Joystick Ext. (E2323).....67.00
- ☐ I561 Straight Handle Flexible Joystick Ext. (E2323).....67.00
- ☐ I826 Chin Cup (E2324).....39.00
- ☐ A24VPS 24V MK6 Auxilliary Power Source175.00
- ☐ AUX12M6 Auxillary Module For 1 & 2595.00
- ☐ AUX34M6 Auxillary Module For 3 & 4595.00

POWER SEATING ACCESSORIES

- ⁹ ☐ 4WSB Four Way Switch Box.....No Charge
- ¹⁰ ☐ S4WSB Multiple Actuator Interface Box (E2311)364.00
- ☐ FWT 4 Way ToggleNo Charge
- ☐ QPB 4 Push Buttons.....No Charge

ASL OPTIONAL ACCESSORIES

- ☐ EGSBLK Egg Switch - Black.....60.00
- ☐ ASL304 Light Wobble Switch w/611 Mount287.00
- ¹¹ ☐ ASL202J Fiber Optic Switch.....543.00
- ¹¹ ☐ ASL208J Adjustable Proximity Switch483.00
- ¹¹ ☐ ASL504M6 Remote Emergency Stop Switch.....469.00

FOOTNOTES

1. Includes Monoport "Y" Cable to provide additional switch input port.
2. TOD-SS: Toggle On/Off Drive Select, Speed, Speed Potentiometer Standard.
3. Drive Select through mode switch, or mode switch and Joystick Commands.
4. PSRM6 Only.
5. Display Only, No Driver Control. Allows choice from order form.
6. Must also use either a Multiple Drive Joystick or MK6 Display.
7. Requires SNPM6 Sip-N-Puff Interface Box.
8. QLAM6 includes ARM250 standard.
9. Required with all multiple actuator systems. Provides a D-9 port for the 4-way toggle or 4 push buttons.
10. Replaces the Four Way Switch Box and allows multiple actuator operation through the driver control.
11. Must add MK6 Auxilliary Power Source.

NOTE: All specifications and dimensions are approximate.

Invacare® Formula™ CG Tilt/Recline
Accessories and Options

Miscellaneous

BATTERY BOXES

- ¹ ☐ GP24 Group 24 Battery BoxesNo Charge
☐ 22NF 22NF Battery Box.....No Charge

² **BATTERIES**

- ³ ☐ 22NFBATTERY 22 NF Battery (On Chair) (E2361).....525.00
☐ 24BATTERY 24 Gel Battery (On Chair) (E2363).....630.00

MISCELLANEOUS ACCESSORIES

- ☐ I303 Wheel Locks109.00
⁴ ☐ 9205-3 Suspension Shocks (E1016).....175.00
⁴ ☐ 9205H-3 Suspension Shocks (Heavy Duty) (E1018)175.00
⁴ ☐ FDR Fender.....105.00
⁵ ☐ EXTP Extended Anti-Tippers.....70.00

FOOTNOTES

1. Only available on Torque SP (Standard on Arrow and Ranger X). Must select for TRBKTS.
2. Batteries will be installed by Invacare Corporation at no additional charge. Chair will be shipped complete with batteries.
3. Not available with Arrow GB, Ranger X, or TrueTrack systems.
4. Standard with arrow GB or True Track Systems.
5. Comes standard with vent tray. Adds 2.5" to overall length.
6. Not available with 19" or 20" wide and 9" casters. Standard with impact guards on the footrests.
7. Manually elevating legrests.
8. Independant powered elevating legrests include elevating and articulating legrests with adjustable angle footplates. Extension range is 13-20". Sold as pair.

NOTE: All specifications and dimensions are approximate.

Front Riggings

FRONT RIGGING

CENTER PIVOT STYLE (ASB) (PAIR)

- ⁶ ☐ 60HD 60° Swingaway FootrestsNo Charge
⁶ ☐ 70NHD 70° Swingaway Footrests.....**Standard**
⁶ ☐ 70STAPER 70° Tapered Footrests.....No Charge
⁷ ☐ AT5544 Manual Elevating Legrests (E0990).....224.00

PIN STYLE (PSB) (PAIR)

- ☐ PVV93 Swingaway Footrests 13.5" - 19"No Charge
⁷ ☐ P904A Swingaway Elevating Legrests 16" - 19.75" (E0990).....179.00
⁷ ☐ PAL4A Smartleg Art. Legrests 17.25" - 21.5" (K0053).....294.00

POWER ELEVATING LEGRESTS-ARTICULATING

- ⁸ ☐ ELRPW Power ELR w/Articulation (E1010).....1,435.00

FOOTPLATE OPTIONS (PAIR)

- ☐ I651 Flip -Up Composite Footplates.....No Charge
☐ I350 Extra Large Aluminum Footplates.....No Charge
☐ AT5543 Adjustable Angle Flip-Up Footplates.....102.00

FOOTREST/LEGREST ACCESSORIES

- ☐ I337 Calf Strap (E0038).....26.00
☐ I600BK Heel Loops w/Ankle Straps (E0951)53.00
☐ LPT2 Longer Pivot Slide Tube For I350.....77.00
☐ IMPACTG Impact Guards.....48.00
☐ ALPT Longer Pivot And Slide Tube77.00
☐ ALPT4 Longer Pivot And Slide Tube 4".....77.00

Seating

**FOR YOUR SEATING NEEDS
PLEASE REFER TO THE FOLLOWING
REHAB SEATING & POSITIONING PRODUCTS
SEE PRICE LIST FORM # 07-027.**

Invacare® Formula™ CG Tilt/Recline

Accessories and Options

Battery Boxes	
*Standard Battery Tray	
Arrow	Group 24
Ranger X	Group 24
Torque SP	22 NF Group 24 (Optional)
*Sealed Gel Cell Batteries Recommended	

Batteries
22NF batteries with terminal configuration (positive on the left and negative on the right) MUST be used. 22NF batteries that have the reverse terminal configuration MUST not be used. Terminals MUST have a cross hole for proper battery connection.
GP24 batteries with terminal configuration (negative on the left and positive on the right) MUST be used. GP24 batteries that have the reverse terminal configuration MUST not be used. Terminals MUST have a cross hole for proper battery connection. See Owner's Manual, part number 1114809. These recommendations MUST be followed otherwise injury and damage may occur.

Contoura Seat Sizes							
	D16	D17	D18	D19	D20	D21	D22
W16	X	X	X	X	X	*	*
W18	X	X	X	X	X	*	*
W20	X	X	X	X	X	X	X
W22	*	*	X	X	X	X	X
W24	*	*	X	X	X	X	X
*Not available with Contoura Seat Cushion							
Back Heights	25" or 29.5"						

Memory Card - BASIC

- Standard with ALL Expandable Control Systems (MPJ+, PSR+, PSF+, MK6i Display).
- Used to Back Up/Restore Programmed Settings for Only One Chair.
- May be given to user or kept with provider's files for safe keeping.
- Does not Contain Advanced Diagnostics/Help Screens/File Structure.
- Not compatible with SPJ+ Joysticks.

Memory Card - PROFESSIONAL

- Standard with ALL MK6i Programmers.
- Available also with USB Card Reader on Order Form.
- Contains Advanced Diagnostics, Help Screens, Software Updates, File Storage/Retrieval.
- Used to back up multiple chairs and programming settings.
- Intended for use by qualified providers only.
- Not compatible with SPJ+ Joysticks.

Storm for Formula _{CG} Tilt/Recline Specifications			
	Arrow	Ranger X	Torque SP
Maximum Speed MPH			
TrueTrack	7	7 (option)	7 (option)
4-pole	N/A	N/A	N/A
4-pole HD	N/A	N/A	6.5
Perf 4-pole	N/A	5	N/A
Seat-To-Floor at 0°			
Low	17.75"	17.75"	17.75"
High	19.75"	19.75"	19.75"
Weight Limits			
<300 lb.			X
<400 lb.		X	
<300 lb. True Track	X		X
<400 lb. True Track	X	X	

Formula _{CG} Tilt/Recline Features and Specifications	
<ul style="list-style-type: none"> ♦ Weight capacity of 300 lb. or 400 lb. (with heavy-duty motors). ♦ Recline range of 170° ♦ Mechanical Shear reduction of 3". ♦ Conventional or Contoura style seating. ♦ Adjustable seat frame with Conventional style. ♦ Seat-to-Floor height of 17.75" at 0° tilt. 	

After Market Backrests	
<ul style="list-style-type: none"> ♦ The following companies also have hardware to make their backrests work with our new canes: <ul style="list-style-type: none"> ♦ AEL - planar seating system ♦ Freedom Designs® - planar seating system ♦ Canyon - planar seating system 	

Conventional Seat Sizes	
Seat Widths	16" - 24"
Seat Depths	16" - 22"
Back Heights	20" - 26"



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www.invacare.com.au

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Otto Bock is a trademark of Otto Bock Orthopaedische Industrien GMBH & Co. Products designated by ASL are Manufactured by Adaptive Switch Labs, Inc. Therafin is a registered trademark of W/R Medical Electronics Co. Freedom Designs is a registered trademark of Freedom Designs, Inc. Specifications and prices are subject to change without notification.
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Supersedes all previous versions

Invacare® KSS Order Form (includes standard KSS seating dimensions)**Price List and Order Form** Effective July 2005

For ease of ordering, contact Customer Services:

Invacare Australia Pty Ltd: Ph +61 2 8839 5333 or Fax +61 2 8839 5353

Prices AUD RRP, Ex-freight

www.invacare.com.au

Client: _____ Phone: _____

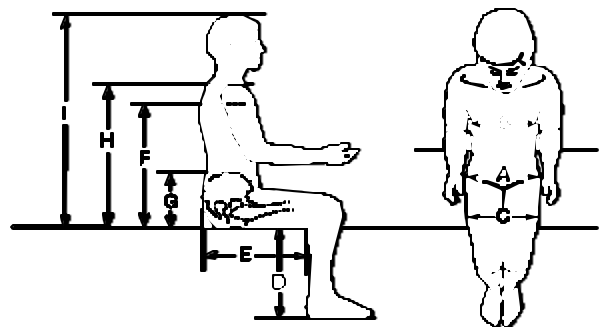
Client Address: _____ P/Code: _____

Dealer: _____ PO#: _____ Date: _____

W/C Make _____ Model _____ Width _____ Depth _____ Back Ht _____

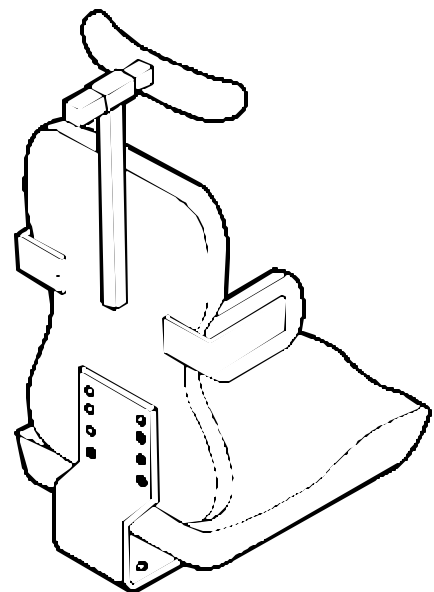
Client Measurements

A	Hip Width	
B	Chest Width	
C	Thigh Width	
D	Leg length below the knee	
E	Thigh length	
F	Axilla to buttocks	
G	PSIS	
H	Shoulder height	
I	Head height	

**Standard KSS Seating System**

A Kinesthetic Seating System includes: Ultimate Base, Curved Back, Basic Headrest, Basic lateral Supports, Padded Lap Belt and a) growth bracket/mounting hardware or b) mounting hardware. Standard KSS items have a 4 – 6 week lead time. For custom product sizing, please complete form where indicated and consult customer service for pricing, availability and lead time. Check below if ordering a complete KSS and make hardware selection on page 3.

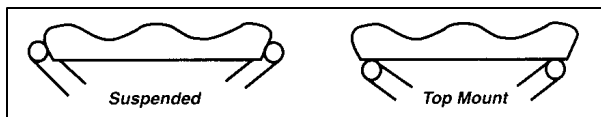
X (1)	W/C Size	Model	Colour (2)	Deluxe	Price
	10" Wide	KSS10R	Black		
	12" Wide	KSS12R	Black		
	14" Wide	KSS14R	Black		
	16" Wide	KSS16R	Black		
	16" Wide	KSS16T	Black		
	18" Wide	KSS18T	Black		
	20" Wide	KSS20T	Black		
	Custom (2)	KSSxxx	Black		



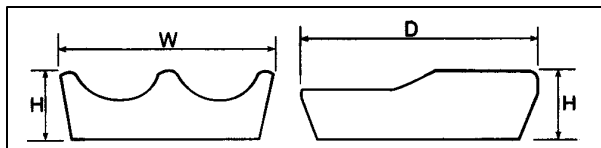
- (1) Select KSS model
- (2) Colour choice is Black only
- (3) Any product over 21" wide, form must include clients weight
- (4) Additional up-charge for customization, call customer services for pricing

KSS Base (Ultimate Base)

Bases are designed to suspend between the seat rails using: a) flush mount hooks, b) 1" drop hooks or c) 2" drop hooks or d) 3" drop hooks.



Standard width (W) and depth (D) and height (H) measurements are listed in the table.



For custom mounting of base, (e.g., when using adductors) please specify if suspended design (plywood drops between rails) or top mounted design (plywood overlaps rails) is desired. Top mount gives additional 2" in total width (outside rail to outside rail).

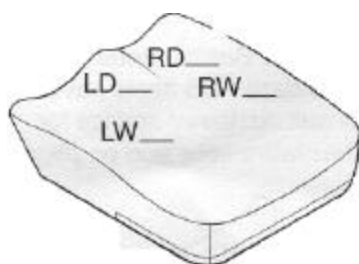
X (1)	W/C Size	Base Model	W	D	H	D/Price (4)
	10"	UMJB1010	10	10 ½	2 ¼	
	12"	UMJB1212	11 ½	12 ½	2 ¾	
	14"	UMJB1414	13 ½	14 ½	2 ¾	
	14"	UMJB1416	13 ½	16 ½	2 ¾	
	16"	UMB1616	16	17	3	
	16"	UMB1618	16	18	3	
	18"	UMB1816	18	18	3	
	18"	UMB1818	18	19 ½	3	
	20"	UMB2016	20	18	3	
	20"	UMB2018	20	19 ½	3	
		Custom Jr (2)				
		Custom Adult (3)				

- (1) Select required base model.
- (2) Indicate custom junior sizes for base and size of wheelchair
- UMJBIAWXXIADXX.
- (3) Indicate custom adult sizes for base and size of wheelchair
- UMBIAWXXIADXX.
- (4) Price only applicable if ordered separately from KSS.
- (5) Additional upcharge for customization, call customer service for pricing.

X	Base Style	Hardware Style			
		Flush	1"	2"	3"
	Top Mount		N/A	N/A	N/A
	Suspended				

Customization Options for Ultimate Base

Leg length discrepancy



Custom cutout to accommodate discrepancy.
pad buildup

Pelvic Obliquity



leg length
Pelvic obliquity

X (1)	Model	Description	D/Price
	L1	1" Cutout; user's Left	
	L2	2" Cutout; user's Left	
	R1	1" Cutout; user's Right	
	R2	2" Cutout; user's Right	
	Custom (2)		(3)

- (1) Select model for leg length cutout.
- (2) Indicate custom log cutout width (RW or LW) and depth (RD or LD) on drawing above.
- (3) Additional upcharge for customization, call customer service for pricing

X (1)	Model	Description	D/Price
	OBL.5	User's left, ½"	
	OBL1	User's left, 1"	
	OBL1.5	User's left, 1 ½"	
	OBR.5	User's right, ½"	
	OBR1	User's right, 1"	
	OBR1.5	User's right, 1 ½"	
	Custom (2)		(3)

- (1) Select model for obliquity modification.
- (1) Indicate custom sizing.
- (3) Additional upcharge for customization, call customer service for pricing.

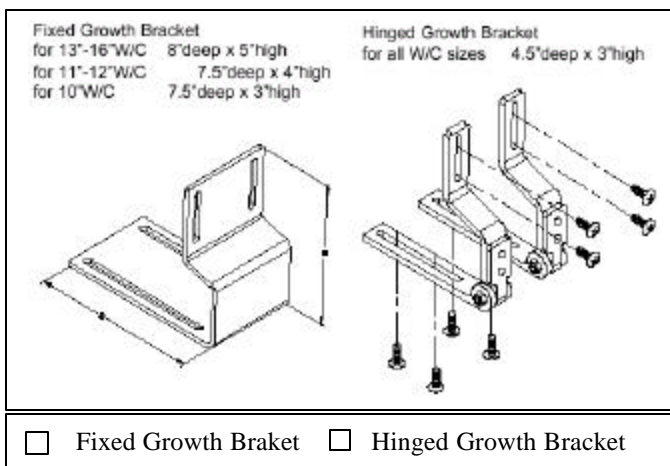
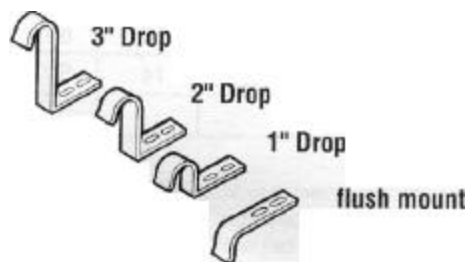
Growth Bracket/Hardware

For base hardware, select..

1.) One pair of hardware, indicating diameter of hardware and number of pieces and style of hardware (e.g., 2 @ 2" drop); also indicate if growth bracket is required or 2.) Two pairs of hardware, indicating diameter of hardware and number of pieces and style of hardware (e.g., 4 @ 2" drop)

Model	Base Model	Fixed Growth Bracket (1)	7/8" Diam	1" Diam	Flush Mount	1" Drop	2" Drop	3" Drop (4)
KSS10R	UMJB1010					N/A	N/A	N/A
KSS12R	UMJB1212							N/A
KSS14R	UMJB1414							N/A
	UMJB1416							N/A
KSS16R	UMB1616							
	UMB1618	N/A						
	UMB1816	N/A						
	UMB1818	N/A						
	UMB2016	N/A						
	UMB2018	N/A						
	Custom Jr (2)							
	Custom Adult (3)	N/A						

- (1) Select if growth bracket required.
- (2) Indicate hardware selection for custom junior size base or system.
- (3) Indicate hardware selection for custom adult size base.
- (4) 3" drop may not be attainable on all chairs.



For back hardware, select..

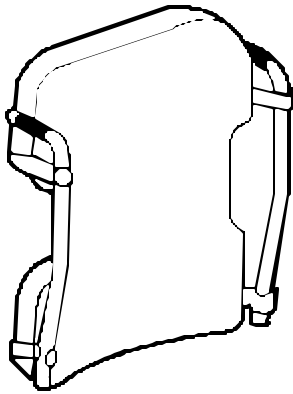
1) If growth bracket ordered above, one pair of hardware, indicating diameter of hardware and number of pieces and style of hardware (e.g., 2 @ 2" drop) or 2) Two pairs of hardware, indicating diameter of hardware and number of pieces and style of hardware (e.g., 4 @ 2" drop)

Model	Base Model	7/8" Diam	1" Diam	Flush Mount	1" Drop	2" Drop	3" Drop (4)
KSS10R	CBK10R (3)						N/A
KSS10R	CBKG10R (3)						N/A
KSS12R	CBK12R						N/A
KSS14R	CBK14R						N/A
KSS16R	CBK16R						
	CBK16T						
	CBK18T						
	CBK20T						
	Custom Jr (2)						
	Custom Adult (3)						

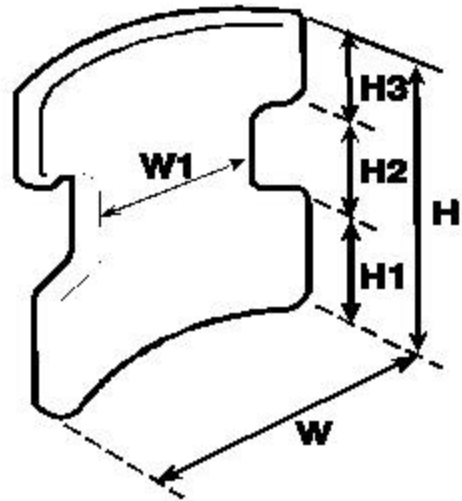
- (1) Indicate hardware selection for custom junior size base or system.
- (2) Indicate hardware selection for custom adult size base.
- (3) CBK1 OR not T-nutted for growth bracket; CBKG1 OR is T-nutted to accommodate growth bracket,

KSS Back / Curved Back

Backs are
drop hooks or c)



designed to suspend between the back posts using a) flush mount, b) 1" 2" drop hooks.



Standard (actual) height (H), width (W) and cutout (W1, H1, H2, H3) measurements are as follows:

X (1)	W/C Size	Base Model	H	W	W1	H1	H2	H3	D/Price (3)
	10"	CBK10R (5)	10 ½"	10"	4 ½"	4 ½"	1 ½"	4 ½"	
	10"	CBKG10R (5)	10 ½"	10"	6 ½"	4 ½"	1 ½"	4 ½"	
	12"	CBK12R	12 ½"	10"	7"	4"	4"	4 ½"	
	14"	CBK14R	15 ½"	12"	9"	5"	4"	6 ½"	
	16"	CBK16R	17 ½"	14"	9 ½"	6 ½"	4 ½"	6 ½"	
	16"	CBK16T	20 ½"	14"	10"	6 ½"	4 ½"	9 ½"	
	18"	CBK18T	20 ½"	16"	12"	6 ½"	4 ½"	9 ½"	
	20"	CBK20T	20 ½"	18 ¼"	14"	6 ½"	4 ½"	9 ½"	
		Custom (2)	Please See Notes Page						(4)

- (1) Select required back model.
- (2) Indicate size of custom back and wheelchair size – CBK/XXX.
- (3) Price only applicable if ordered separately from KSS.
- (4) Additional up-charge for customization, call customer service for pricing.
- (5) CBK10R is not T-nutted for growth bracket; CBKG10R is T-nutted to accommodate growth bracket.

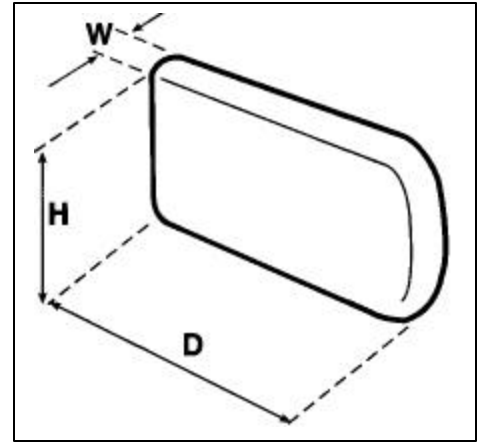
☐ See diagram attached for builder specifications

KSS Lateral Supports

Standard (actual) width (W), depth (D) and height (H) measurements for the lateral supports are as follows:

X (1)	H/Ware Style	Model	H	D	W	D/Price
	Basic	BLSFLG	5"	7 ½"	1"	
	Basic	BLSFMD	4 ½"	6"	1"	
	Basic	BLSFSM	4"	5"	1"	
	Swingaway	BLSSLG	5"	7 ½"	1"	
	Swingaway	BLSSMD	4 ½"	6"	1"	
	Swingaway	BLSSSM	4"	5"	1"	
	Custom (2)					

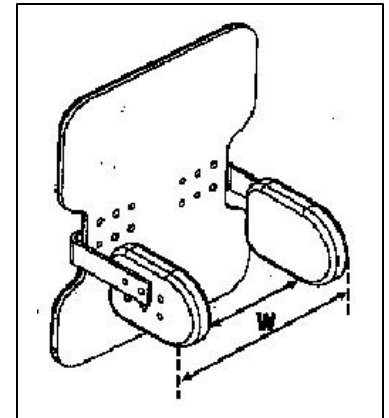
- (1) Select hardware style required (lateral supports come in pairs).
- (2) Indicate sizes under H, D & W and hardware style (i.e., basic, swingaway)
- (3) Price only applicable if ordered separately from KSS.
- (4) Swingaway laterals available as additional charge item.
- (5) Additional upcharge for customization, call customer service for pricing.



Minimum and maximum width adjustments of laterals supports on curved back are indicated. (Note: more width can be achieved if back is flush mounted.) The chart below is for informational purposes only; no selection necessary.

W/C Size	Base Model	Min Width	Max Width (1" or 2" drop)	Max Width (flush mount)	Range in H+ Adj (1)
10"	CBK10R (2)	5"	7"	8"	3"
10"	CBKG10R (2)	5"	7"	8"	3"
12"	CBK12R	5"	7"	8"	3"
14"	CBK14R	7"	9 ½"	9 ½"	3"
16"	CBK16R	8"	10"	10"	3"
16"	CBK16T	8"	10"	10"	4"
18"	CBK18T	8 ½"	11 ½"	11 ½"	4"
20"	CBK20T	11 ½"	14 ½"	14 ½"	4"

- (1) Range in height adjustments includes adjustment allowed by placement of hardware on back and placement of hardware on lateral pad.
- (2) CBK1 OR is not T-nutted for growth bracket; CBKG1 OR is T-nutted to accomodate growth bracket.



KSS Neck and Head Support

Basic Headrest

		Pad Size		Hardware Adjustment		Hardware Length		
X (1)	Model	H	W	A (2)	B (2)	AL	BL	D/Price (3)
	BNSC (child)	2 ½"	7 ½"	3"	5 ¾"	5"	8"	
	BNSA (adult)	3"	10"	5"	5 ¾"	7"	8"	
	Custom (4)							(6)
	Other (5)	N/A	N/A	N/A	N/A	N/A	N/A	
	HR15	N/A	N/A	N/A	N/A	N/A	N/A	

(1) Select headrest model.

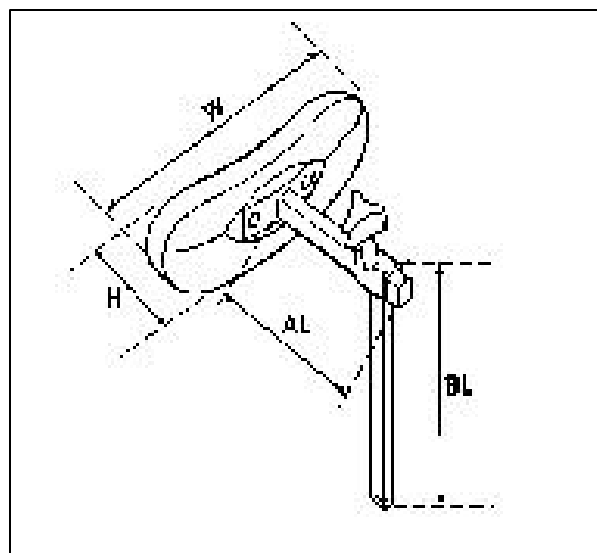
(2) Adjustment ranges via hardware are indicated vertical and horizontal.

(3) Price only applicable if ordered separately from KSS.

(4) Indicate custom sizes.

(5) Other styles of head support available at additional charge (consult customer service for pricing); may require Adjustable Headrest Adapter Plate (HR15).

(6) Additional upcharge for customization, call customer service for pricing.



Padded Lap Belt

		Overall Length (3) (OL)		(PW)	(WW)	
X (1)	Model	Max L	Min L	Pad Width	Webbing Width	D/Price (4)
	BPSLG	60"	25"	1"	1 ½"	
	BPSMD	34"	17"	1 ½"	1"	
	BPSSM	32"	13"	1 ½"	1"	
	Custom (2)					(5)

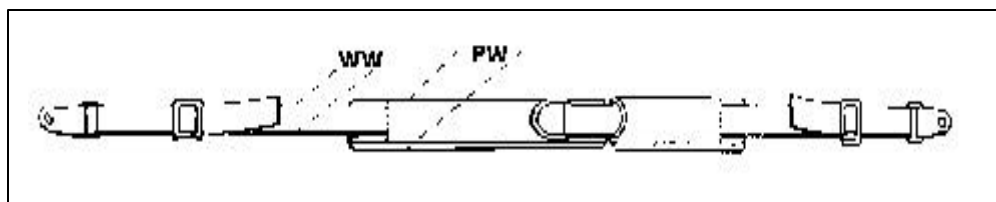
(1) Select belt model.

(2) Indicate custom sizes.

(3) Maximum and minimum length adjustments are indicated.

(4) Price only applicable if ordered separately from KSS.

(1) Additional upcharge for customization, call customer service for pricing.

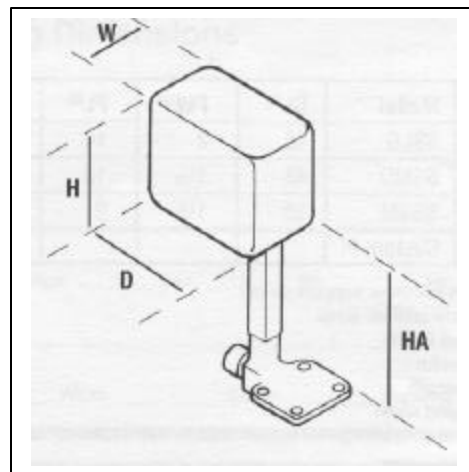


Abductors

Abductors include flip-down height adjustable mounting hardware. Pad can be reversed for backward/forward depth adjustment.

X (1)	Model	H	D	W	HA (3)	D/Price
	ABDLG	4"	6"	3 ½"	3 ½"	
	ABDMD	3"	4 ¾"	2 ¼"	1 ½"	
	Custom (2)					(4)

- (1) Select abductor model.
- (2) Indicate custom sizes.
- (3) Height adjustment range.
- (4) Additional upcharge for customization, call customer service for pricing.

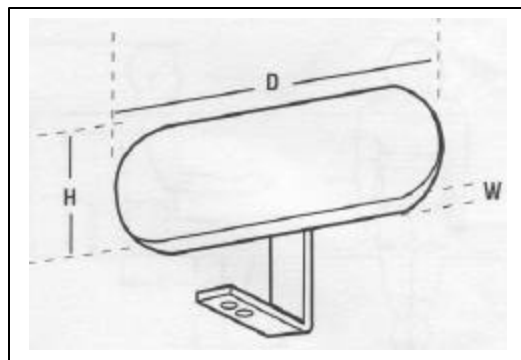


Adductors

Note: When ordering adductors, base must be top mount only to accommodate t-nutting for hardware to attach adductors

X (1)	Model	H	D	W	D/Price
	ADDMD	4 ½"	12"	1"	
	ADDLG	4 ½"	14"	1"	
	ADDSM	4 ½"	10"	1"	
	Custom (2)				(4)

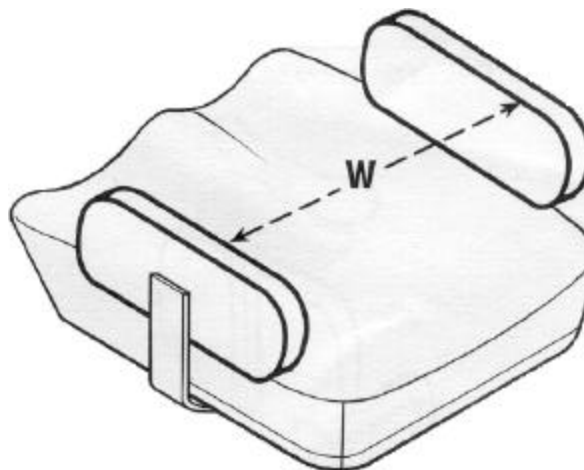
- (1) Select adductor model.
- (2) Small: fits models UMJ12-14; Large: fits models UMB16 and larger.
- (3) Indicate custom sizes.
- (3) Additional upcharge for customization, call customer service for pricing.



Width adjustment chart for maximum and minimum width positioning of adductors on Ultimate bases using flush mount hooks:

Model	Max*W	Min W
UMJB1010	12 ½"	8"
UMJB1212	12 ½"	8"
UMJB1414	14 ½"	10"
UMJB1416	14 ½"	10"
UMB1616	16 ½"	12"
UMB1618	16 ½"	12"
UMB1816	18 ½"	14"
UMB1818	18 ½"	14"
UMB2016	20 ½"	16"
UMB2018	20 ½"	16"

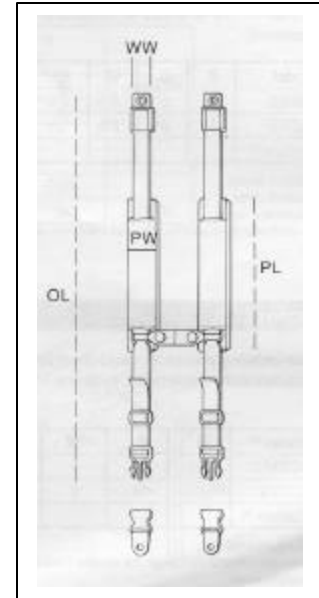
*Max width will vary with wheelchair model



Shoulder Supports

X (1)	Model	OL (3)	PW (4)	PL (5)	WW (6)	D/Price
	SSLG	45	2	14	1 ½	
	SSMD	43	1 ½	12	1	
	SSSM	35	1 ½	9	1	
	Custom (2)					(7)

- (1) Select shoulder support model
- (2) Indicate custom sizes
- (3) Overall length
- (4) Pad width
- (5) Pad length
- (6) Webbing width
- (7) Additional upcharge for customization, call customer service for pricing



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