



**SIDESTIX**

SideStix Ventures Inc.

4484 Hilltop Road, Sechelt, BC V0N 3A1  
Tel: 1-877-464-7849 info@sidestix.com  
Fax: 1-888-784-9580 www.sidestix.com

To:	Re:	Date:
-----	-----	-------

Dear Sir / Madam:

SideStix are patent pending forearm crutches. They are designed and manufactured for the purpose of enabling clients to enjoy a healthy and active lifestyle, whilst helping to prevent secondary injuries that can occur through the prolonged use of other assistive devices.

### **Ergonomics and Biomechanics**

- Contoured grips: Areas of different density provide superior support in load-bearing regions of the hands. The grips have the capability for micro adjustment to customize to an individual's hand design. Optional neoprene grip covers are available to provide extra cushioning & slip resistance.
- Geometry of the forearm tube & handle tube: The forearm and handle tube have been designed to keep a slight bend in the elbow and to maintain a neutral wrist position. Studies have suggested that decreasing elbow extension during crutch gait may reduce the incidence of ulnar nerve compression (Ginanneschi, 2009).
- Cuff Pads: Leather cuff pads are provided to help prevent bruising of the forearm.
- Weight Distribution: The crutch design was developed with an emphasis on reducing weight at the crutch tip which has been achieved by placing the shock system under the handle. Utilizing lightweight materials (6061 Aluminum and carbon fiber) has reduced the overall weight, therefore reducing inertia. The lightweight carbon fiber tubes are an ideal option for individuals with minimum strength and muscle weakness.
- Crutch Sizing: SideStix are custom built, based on the client's specific dimensions.
- Damping shock absorbers: The shock absorbing system has been developed to reduce the rate of force application. Reducing force application correlates to a reduction in joint forces in the wrist, elbow and shoulder joints.
- Articulating & rotating feet: The innovative crutch feet have been designed to increase safety, by allowing the tip sole to remain in complete contact with the ground during a typical crutch stride. These optional rotating feet have been designed with the goal of reducing torque experienced by the shoulder joints, which helps to prevent injury.

### **Modular System**

SideStix promote a healthy, active lifestyle by offering the following additional attachments:

- Snowshoes and sandshoes
- All terrain tips with carbide cleats

### **Durability & Sustainability**

- SideStix have a lifetime warranty on the frame and a 2 year warranty on other parts, except for grip covers, grips & tips, which are considered 'consumables'. Wear rates for consumables will depend upon usage.
- SideStix are manufactured from the highest quality materials, using state-of-the-art equipment. In-house stress testing and on-going university-based biomechanical testing, ensures that unlike other crutches on the market today, which must be replaced several times each year, SideStix are a one-time purchase.

Long term crutch walking can cause significant secondary injuries, which are painfully debilitating for the user and require expensive remediation for the health system. SideStix are designed by users for users and provide choices for an active & healthy lifestyle, whilst significantly reducing the potential for secondary crutch-use-related injuries.

Sincerely,

---