HOW TO USE THE INGSTROM MOBILE/PORTABLE RESCUE CHUTE

1. The Mobile/Portable Rescue Chute is designed to provide a dual function in 1 unit movable rescue facility. The universal foldable platform can be installed at the bucket of aerial ladder or skylift for high rise rescue operations. The foldable platform has a pair of screws that serve as hangars that can hang on the parapet of balcony with handrail within minutes for ready use. With additional equipment, it can also be used from the parapet of balcony without handrail or window of building for the rescued to get out of the building through the chute.

2. Check carefully what is the maximum safety load of your aerial ladder or skylift can carry. Add your weight plus the chute and the platform (3 layers chute weight is about 1.2 kg per metre and the weight of the platform is about 25 kg) plus the estimate weight of 75 kg for each additional person on the platform or in the chute. Remember the danger of overloading exceeding its lifting capacity will damage the vehicle and can also result in a catastrophe.

3. Know the maximum length of the chute and the maximum elevation that the aerial platform can reach. Remember the length of the start piece and the length of each prolongs pieces, example, the start piece is 7m, each prolong pieces is 3m, and the maximum length is 22m consist of 1 start piece and 5 prolong pieces.

4. Prior to the deployment, quick assess the site and determine the length of the chute needed to reach the height of the building where the people you intend to rescue. Remember the start piece cannot be shortened, connect additional prolong pieces to meet the desired length. If the rescue operation needed at various floors, it would be easier to start moving people from the upper floor down to the lower floor, if the emergency situation allows. It is easier to shorten the chute to the required length by disconnecting a segment or more of prolong piece(s) from the ground.

5. When deploying the mobile rescue chute for rescue operations, ensure that the frame of the unfolded platform is properly installed and “locked” on to the bucket of the aerial platform. Put in place the red fiberglass container onto the universal platform. Put in place the chute with the desired length through the container. The start piece with the mounting ring will sit firmly on the mouth of the container while the rest of the chute will flow down up to 80cm from the ground. Ensure the security rope at the canal of kevlar of the start piece is tied to the bucket but not too tight.

6. Should the surrounding of the building could not accommodate the fire aerial truck, the portability of the unit allows the rescue personnel to carry the foldable platform to the desired floor.

7. The foldable platform has a pair of screws that serve as hangars that can hang on the parapet of balcony with handrail within minutes for ready use. With the additional equipment – a few sets of “always in place bolts and nuts”, a pair of horizontal arms, a pair of extendable vertical legs, a pair of hydraulic jacks, it allows the rescue chute to be positioned at the parapet of balcony without

handrail and window. The rescuers must ensure that the wall of window and balcony, the ceiling and the floor of the site where the portable rescue chute is going to be deployed on is structurally sound and safe for the deployment of this unit.

7.1 Extending the vertical legs with the hydraulic jack from floor to ceiling.

7.2 Place the horizontal arms on the parapet and connect it to the vertical legs at position 90 degrees.

7.3 Place the folded platform on top of the horizontal arms and hold it with the "always in place bolts and nuts", loosely fasten.

7.4 Push the unfolded platform outward along the horizontal arms to a position that the chute will not hit against the wall and fasten locked at that position.

7.5 Put in place the red fiberglass container onto the universal platform.

7.6 Put in place the chute with the desired length through the container. The start piece with the mounting ring will sit firmly on the mouth of the container while the rest of the chute will flow down up to 80cm from the ground.

7.7 Ensure the security rope at the canal of kevlar of the start piece goes through the red container and tied firmly to the balcony rail or equivalent. For additional safety, tie the security ropes on the frame of the unfolded platform against building columns or equivalent.

7.8 Prior to the start of the rescue operation, get at least 2 or 3 men from ground to pull the chute to ensure it is in place and ready to be used for rescue.

7.9 Ensure the total load upon the portable unit resting on the horizontal arms include weight of platform, chute, and people(s) in the chute should not exceed 200 kg or do no exceed 50m in height.

8. There must always be someone at the platform to control the flow of human traffic waiting to be rescued and guide the person entering the chute.

9. Similarly there must always be someone at the ground to ensure that the end of the chute is about 80cm from landing.

9.1 The assistant at ground must stand behind the rescued at the exit point of chute, always look upward, keeping a firm grip of the chute by twisting 2 times.

9.2 The assistant at the exit point of chute should inform rescued verbally before his/her near arrival by stating, "there are 2 – 3 metres to go". Tell the rescued to stretch down his/her legs until he/she can touch the ground and then to crouch down in order to emerge from the chute.

9.3 If a rescued is descending too fast, the assistant must always be ready to twist the chute to slow down the speed of descends.

10. During rescue operations, priority is given to bring people on stretcher or unconscious to safety one by one. The person at the ground will twist the chute at full length and slowly untwist the chute to guide the rescued to slide gradually to the ground and help the rescued to get out of the chute safely.

11. Children will be next to be rescued follow by people with disability. Children should be carried by able-bodied people in the arm or on the shoulder, if not twist the chute to guide the rescued slide gradually to the ground. The disabled people could either carried by able-bodied on the shoulder, if not twist the chute.

12. Lastly, the able-bodied people. Rescued sit on the edge of chute placing hand at either side of the socket. Slide in to the chute waist level using hands for assistance. Spread out legs so that chute is providing support. Release hands and place around ahead to allow self to slide down. Slide down the chute at a constant speed by the control of knees and elbows action.

13. Under extreme emergency condition, we try to get as many people out of that particular floor in the shortest possible time. Instead of having one person at a time to slide down the chute, you may allow 2 to 3 persons, one after another in the chute, but at least 1-2 metres between each people. If one above is sliding too fast, twist the chute between the lowest person and the one above quickly. Try to get each rescued out of the exit point of the chute as quick as possible so as to ensure a continuous flow of human traffic out of the building through the chute.

14. After each rescue operation:

14.1 It would takes 2 people to stand on top of chute to take hold of the chute-mounting ring and pull from the kevlar chute up through the container.

14.2 Take the red fiberglass container out of the platform.

14.3 Unlock the universal foldable platform, and fold it back for storage.

14.4 Ensure the chute must be dry before folding in order and putting it back into its respective protective storage (bags).

14.5 Ensure the additional equipment: a few sets of “always in place bolts and nuts”, a pair of horizontal arms, a pair of extendable vertical legs, a pair of hydraulic jacks are kept in designated storage.

14.6 Ensure the mobile/portable rescue chute unit will always be ready for next rescue operations use!