

## Fitting Instructions for DSC V Concertina Loft Ladder

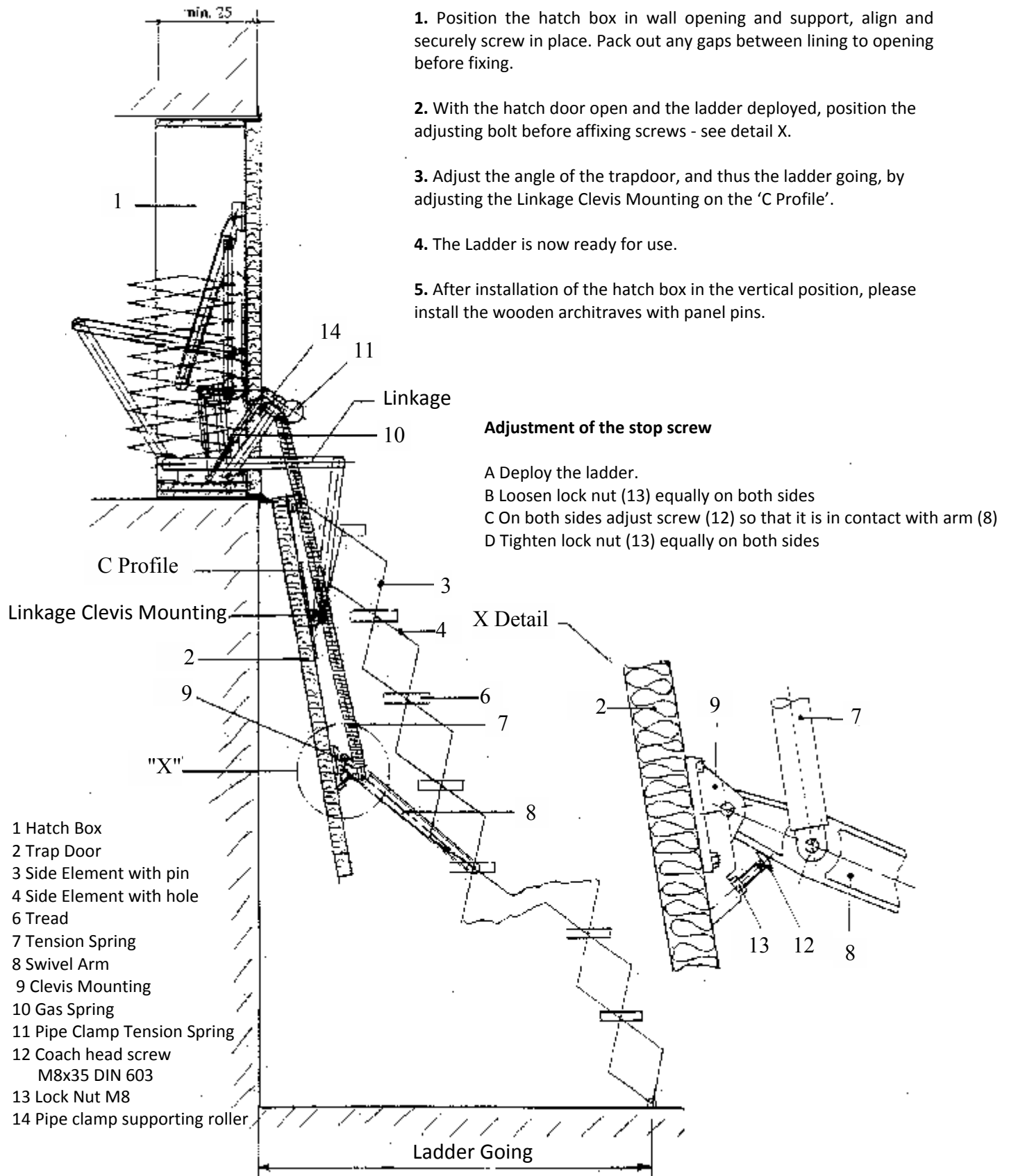
1. Position the hatch box in wall opening and support, align and securely screw in place. Pack out any gaps between lining to opening before fixing.

2. With the hatch door open and the ladder deployed, position the adjusting bolt before affixing screws - see detail X.

3. Adjust the angle of the trapdoor, and thus the ladder going, by adjusting the Linkage Clevis Mounting on the 'C Profile'.

4. The Ladder is now ready for use.

5. After installation of the hatch box in the vertical position, please install the wooden architraves with panel pins.



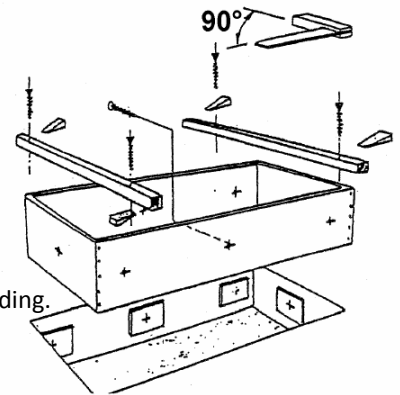
# DSC Fitting Instructions

Please read this instructions with care before you install the ladder and follow the instructions.

Fastening parts are not included in the delivery, please order this parts by a specialist retailer. You can use the stairway only if you have installed the hatchbox complete.

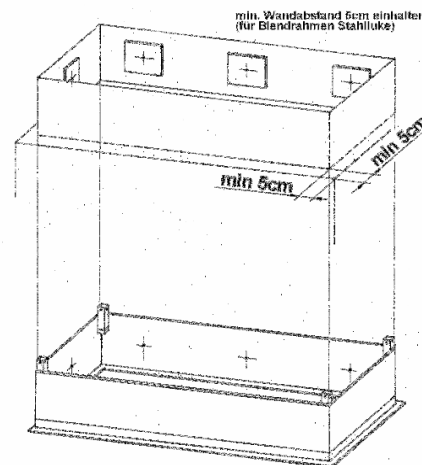
## 1. Stairways with wooden hatchbox

- 1.1 For fixing the hatchbox in the opening (from above) use leashes (ca. 30 x 30 mm) and fix the leashes with screws for wood (min.  $\varnothing$  4,5 x 70).
- 1.2 Place wooden wedges under the leashes until the hatchbox is in a horizontal position and is equivalent with the underside of ceiling. (Please see details in the drawing)
- 1.3 Place hatchbox central into opening. Take care that it is rectangular (take care for well balancing in the opening). Make sure that there is wood between hatchbox and opening at the places the screws are planned.
- 1.4 Install the hatchbox with screws (mind.  $\varnothing$  6 x 70) in necessary pieces (min. 6x) save in the building.
- 1.5 Please fill the crack between hatchbox and opening with insulation material.
- 1.6 Please fix cover strips with wire nails (1,8 x 35mm) or you fix panels at the underside from The hatchbox.



## 2. Stairways with steel casing

- 2.1 Please proof available measures.
  - a) Length and width of the opening
  - b) Depth of ceiling
  - c) Length and width of steel casing
  - d) Height of the steel casing
- 2.2 Bring steel casing (2) from below of opening in fixing position, install part 6,7,8,9 like drawing. Fit Screws M16 x 160 (8) on all four corners (underside of nut equivalent) and fit it in given pipes. **Caution:** please turn screw (8) not to deep, under holder (6) lift up the hatch and let it swing over the fringe of steel hatchbox and floor.
- 2.3 Fit strong enough cable on all four corners on the holders (6) with hooks (9), like DIN 82101 (not included in delivery) and pull the hatchbox in the opening.



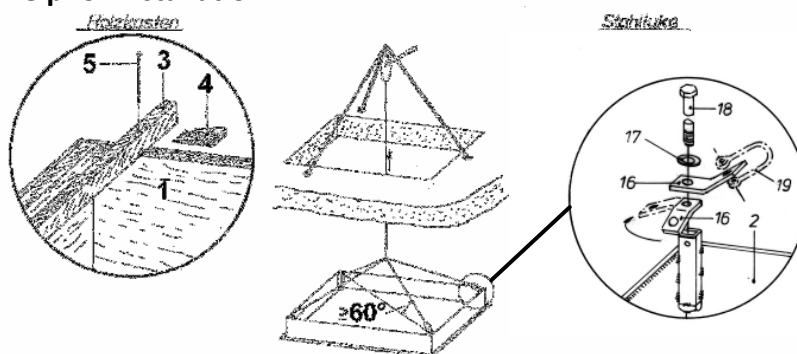
**Caution:** lift up the hatchbox with care.

„Please observe accident prevention“

For safety put on fitting pillars on Z- frame of hatch, to prevent that the hatchbox can fall down. Make sure that you can open the trapdoor for adjustment.

- 2.4 Below holders (6) on all four corners swing to outside, cause they are lying on the flat. If you need, use a pad. Place the steel hatchbox with screws and a spirit - level. **Caution:** do not turn screws (8) outside from the nut „danger, hatchbox can fall down“. Take care that hatch is placed central into opening and rectangular . Please proof function from stairway by opening of trapdoor.
- 2.5 Install steel casing with screws (min.  $\varnothing$ 6 x 70 mm) in necessary pieces (min. 8x) save in the building.
- 2.6 After complete installation please fill the crack between hatchbox and opening with plaster, cause „fire resistance is ensure “.
- 2.7 After installation from the hatch take parts 6,7,8,9 away. The square pipes in the corners are for fixing from the guard rail.

## 3. Help for installation



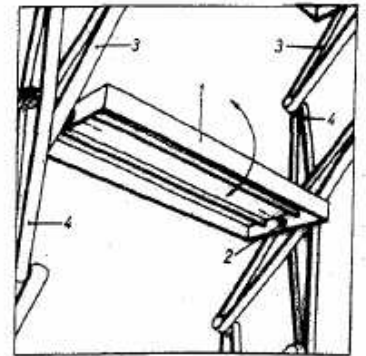
1. Wooden hatchbox (fit it from above)
2. Steel casing (fit it from below)
3. Cover strip (ca. 30x30 mm)
4. Special part for exact adjustment
5. Screw for plywood  $\varnothing$ 4,5x70 ( $\varnothing$ 2,5 mm drill hole)
6. Holder (8x)
7. Washers A17 DIN 125 (4x)
8. Screw M16 x 150 DIN 931 (4x)
9. Hooks (not included in delivery)

## 4. Adjustment from treads, stop screw and adjustment of middle support

### Adjustment of treads for type Junior and Standard

- Open concertina ladder and bring stair in position for use
- Open nuts (2) at the inner side of tread till you can turn all treads (Please do not use the stairway)
- Bring treads in horizontal position and tighten the nuts

- Tread
- Nut M8 DIN 934
- "Bolzenglied" (inner scissor)
- "Lochglied" (outer scissor)

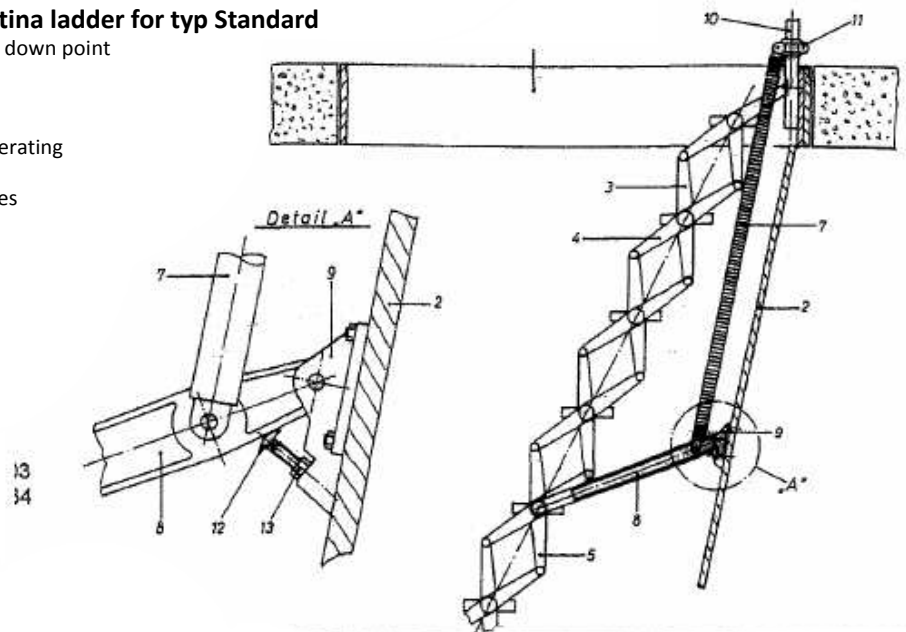


### Adjustment of stop screw by concertina ladder for typ Standard

No standard equipment for fixing from touch down point

- Open stair and put it on the floor
- Open counter nut (13) on both sides
- Turn screw for adjustment (12) till operating arms lie flat
- Tighten counter nuts (13) on both sides

- Hatchbox
- Trapdoor
- Inner scissor
- Outer scissor
- Inner scissor
- Tread
- Spring
- Operating arm
- Bracket
- Pipe for spring
- Clamp
- Screw M8 x 35 DIN 603
- Nut M8 x 35 DIN 934

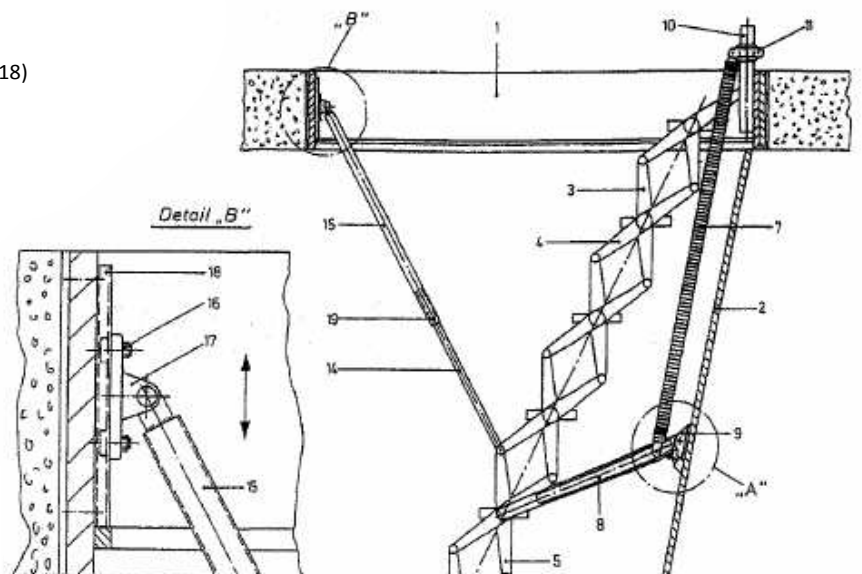


### Adjustment of middle support by type standard

No standard equipment – only for ladders for over 3,40 m floor to ceiling height

- Open stair and put it on the floor
- Open nuts (16) on both sides by unloaded stair, move bracket on C-shaped clamp (18) till bolt (19) stands on stop.
- Tighten nuts (16)

- Hatchbox
- Trapdoor
- Inner scissor
- Outer scissor
- Inner scissor
- Tread
- Spring
- Operating arm
- Bracket
- Pipe for spring
- Clamp
- Screw M8 x 35 DIN 603
- Nut M8 x 35 DIN 934
- Middle support lower part
- Middle support upper part
- Nut
- Bracket
- C-shaped clamp
- Stop bolt



# DSC Operating Instructions

## Opening of concertina

1. Open cover with operating pole hooked into eye of catch carefully and push to end position by hand. Remove operation pole.
2. Pull out concertina with the other hand until it stands save on the floor.
3. Concertina can be used now.  
Maximum loading per tread 200 KG  
Maximum loading per stair 500 KG/m<sup>2</sup>
4. Keep a good hold at handrail or scissors when when walking up and down
5. We recommend to walk up frontward and walk down backward

## Closing of concertina

1. Push together concertina until it rests on cover. Keep hold of cover while doing.
2. Close cover slowly with operating pole hooked into eye of catch  
Caution: do not grip between scissors and treads or concertina and cover - danger of getting squeezed.
3. Unhook operating pole from eye of catch.

## Maintenance:

1. Check if all screws, nuts and safety parts are tight regularly
2. Oil or grease all moving parts regularly

## Safety device:

Do not use concertina without 3-sided guard rail.

