

Operating instruction

Bird weigher

System Swing 20/ 70

Code No. 99 97 1382

Edition 02/2005

M 1382 GB

Thank you very much for your confidence !

You are now the proud owner of a new **Big Dutchman**

Bird weigher

System Swing 20 / 70

We are convinced that you will be extremely satisfied with it.



EC Declaration of Conformity

We declare that the design and model of the machine described above, marketed by ourselves, fully complies with the health and safety requirements of the relevant EC Directive.

Guarantee Declaration

This machine is guaranteed in accordance with the **Big Dutchman** International GmbH General Conditions of Sale for customers in Germany and the **Big Dutchman** International GmbH International Conditions of Sale for customers not resident in Germany.

Note

To ensure that your new equipment will always function properly and efficiently and to ensure your personal safety, would you be kind enough to:

Study this manual thoroughly and take particular note of the warning and safety instructions before starting up the machine for the first time.

Operating instructions Bird weigher

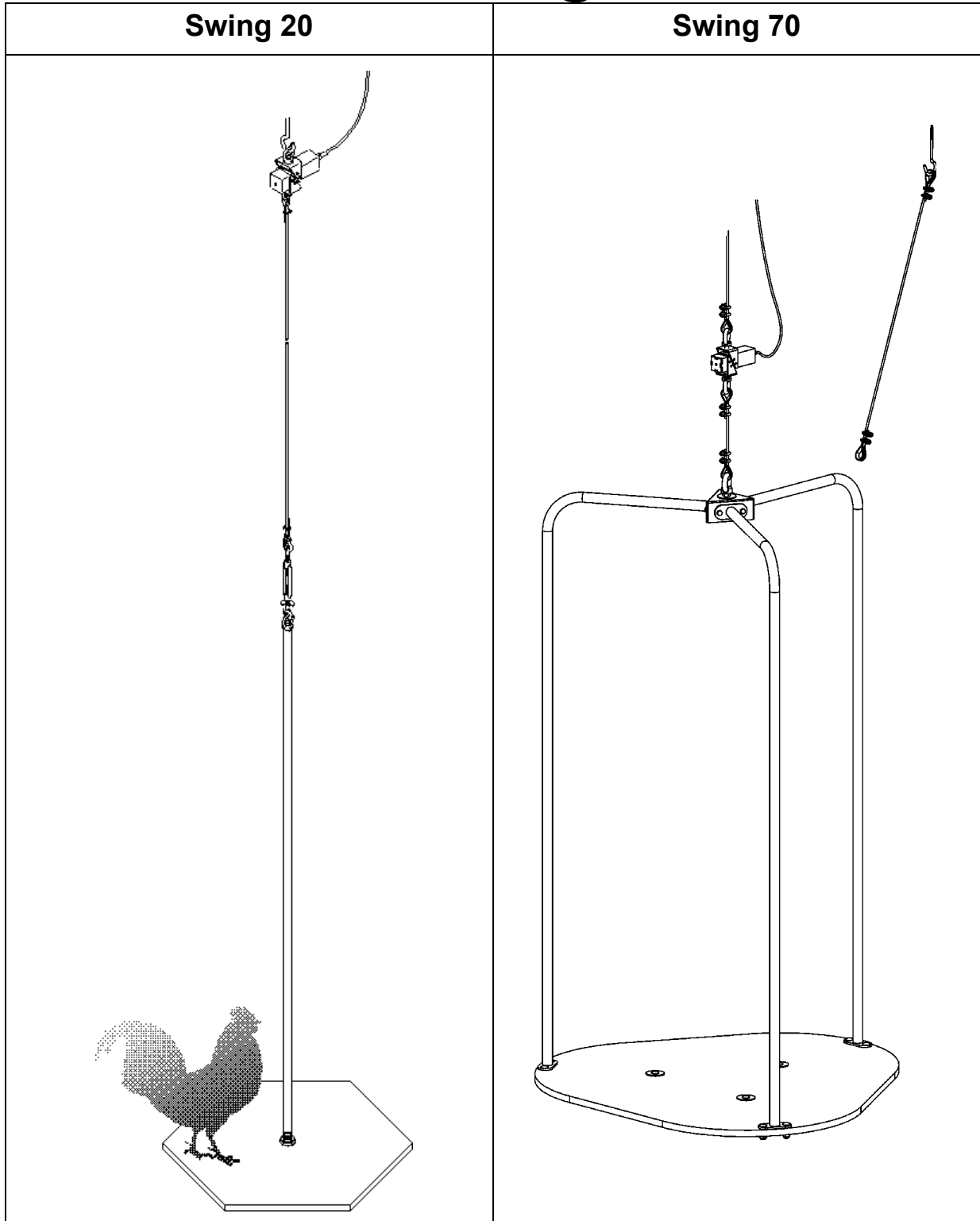


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It is forbidden to step on the platform or to pull at the rope, since this might damage the weighing cell.

Max. load is 20 kg for Swing 20 and 70kg for Swing 70

1 Product description

Your new bird weigher is a high-precision product requiring special care.

Swing 20/70 is a hanging scale that can be used together with the MC 95 broiler or breeder production computer. It can handle poultry up to 20/70 kg weight with outstanding precision.

Since the platform is suspended from a wire cable, it can be easily removed for cleaning. The platform itself does not contain any electric parts and can thus be treated with a high-pressure cleaner.

The scale can be calibrated by means of standard weights via parameters read from the MC 95 service menu.

These parameters have to be programmed in the installation section of MC 95 bird weighing menu. After this, the scale is ready for operation.

It is possible to connect two bird weighers type Swing 20 or Swing 70 to an MC95-1, four bird weighers to an MC95-2 and eight bird weighers to an MC95 W8. That means two per house compartment.

**Important !**

Do not expose the weigher to blows and strikes or high traction forces exceeding 20 kg (Swing 20) or 70kg (Swing 70). Do not step on the weigher !

**Important !**

If there are zones with different climatic conditions in the house, or the uniformity of the flock is not very good, the total weight of the flock may differ from the individual weight per animal as displayed by the scale.

2 Operating instructions

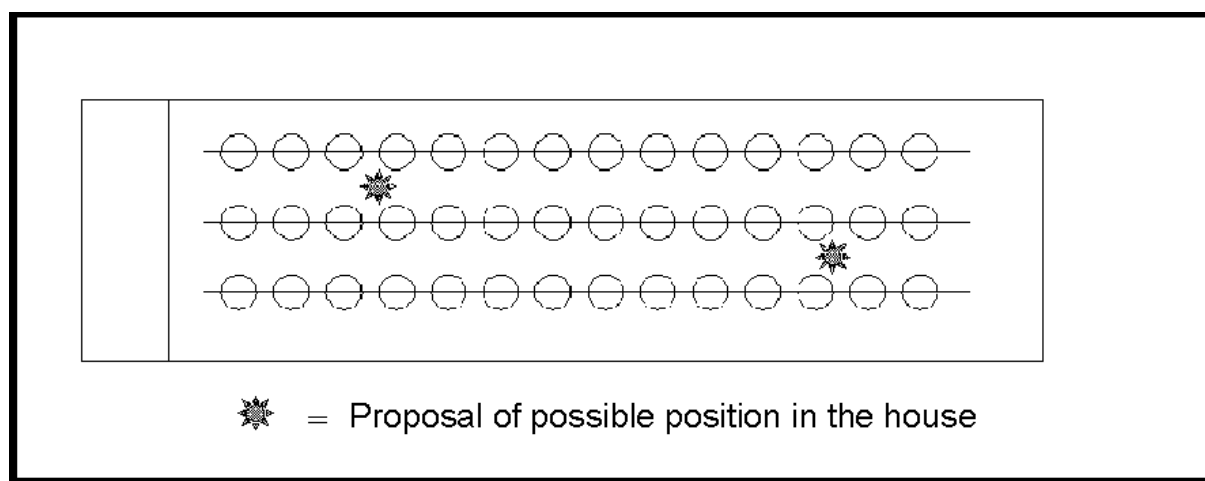
2.1 Starting the growing period

2.1.1 Hanging the scale

Before placing the scale make sure that the suspension bolt is located in the centre of the rope winder and then fix the bolt by means of the attached wing nut.

2.1.2 Positioning the scale

Fix the position of the scale upon electrical installation. Choose a neutral position in the house. It should be located between feed and water lines but not too close to the service room. Birds should not get disturbed by noises or people entering the house. Upon installation, make sure that the scale is not located directly in the area of air intake or outlet openings.



2.1.3 Adjustment in height

The height from the ground of the platform is of decisive importance for the number of weighings per day. In general, it should be adjusted as low as possible. For this, pay attention that the amount of litter increasing during the growing period does not come into contact with the platform.

Always take into consideration that in mixed growing, male birds are heavier and thus more passive than female birds. Experience has shown that such birds do not climb the platform as frequently if it is placed too high. This might falsify the average weight evaluated.

2.2 Daily use

The weigher is designed in order to operate without supervision. The following settings, however, have to be carried out and observed accordingly.

2.2.1 Setting reference curve bird weight in MC 95

It is important to correctly adjust in the MC 95 the reference weight and the search limitations for the birds housed for the scale to weigh precisely.

Follow these instructions:



Press

Press **Scale 1** Press **Ref. curve**



Press The first day no. is set in square brackets ([]).

In this curve you now have to enter exactly the bird weight data at growing day 1 - x. Usually, you can take these data from the "house cards" you received from the breeding company. Moreover, you should pay attention upon entering the different points that you really make use of all eight possible points. If the growing period lasts 38 days, enter e.g. growing day 40 with the respective weight (38 days + 2 days in case the growing period takes 1 to 2 days longer) at point eight in the curve and do not leave day 50 if it has already been entered.

If two weighers are connected, you have to select a reference for scale two as well and enter it for scale one as described above.

2.2.2 Info Survey Scale 1



Press **Scale 1**

Now you see the survey of scale 1.

The following information is indicated here:

- A The bird weight in grams of the past 4-hour cycle.
- B The increase in grams per bird.
- C Standard diversion in %, e.g. 10.4 %, i.e. the uniformity of the flock. If you have extreme variations from one growing period to the next you will hardly be able to predict a precise depletion weight.
- D The current reference weight ! Make sure that the reference weight indicated is matching the situation in your house. If not, modify the reference curve for the desired bird weight.
- E Number of birds weighed. The indicated number also provides information on a possibly wrong reference weight, soiling of the scale or possible connection to the ground of the weighing platform. You should be able to read weighings here from the first day on. The number of weighings will decrease with the age of the birds.

If two scales are connected, this survey can also be called in for scale No. two.

2.2.3 Configuration Scale 1



Press

Press**Scale 1**

Press**Config:**

Upon initial operation, basic values evaluated by extensive testing will be entered.

The entries have the following meaning:

A Search limitation +/- 30 %

This parameter indicates which bird weights are registered. If a bird up to 30 % heavier or lighter than the reference weight enters the platform, it is accepted and registered. A wider search limitation is not to be recommended. A stricter search limitation could be used in case of separate-sex growing.

B Correction factor

Here, the currently active correction factor is indicated. The value can also be modified here. Its task is described in point 2.2.4. Correction factor.

2.2.4 Correction factor curve



Press

PressScale 1

PressConfig:

PressCorrection:

The natural behaviour of the birds causes that the heaviest birds do not step on the scale as often as lighter birds. The average weight of the flock evaluated would consequently be too small without this factor. Enter the following basic values in the curve.

| | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|
| 1 | 7 | 14 | 21 | 28 | 34 | 38 | 45 |
| 100 | 102 | 104 | 107 | 110 | 110 | 110 | 110 |

Big Dutchman recommends to compare the results evaluated during the first growing period curve with the basic values on the cut-off dates entered in the in order to adapt them to other birds (breeds) if required.

You can proceed as follows:

A Catch a number of birds, if possible in the dark, by means of a cardboard ring etc.

B Weigh these birds manually on a suitable (precise) scale.

- C If a factor, e.g. 102 is already existing for this cut-off date, since it has been entered a few growing periods before, calculate as follows:

$$219/211 \times 1.02 = 1.05$$

The new factor for this cut-off date would then be rounded off to 105.

In this respect we would like to point out again the problem of variations explained in point 2.2.2. If you purchase birds from another breed or if the breeder flock is very young, which could lead to differences in weight among the birds, regularly check these parameters during growing.

**Important !**

If there are zones with different climatic conditions in the house, or the uniformity of the flock is not very good, the total weight of the flock may differ from the individual weight per animal as displayed by the scale.

2.2.5 Actual weight on scale



Press

Press**Scale 1**

Press**Actual**

It is possible to view the following values in this menu:

- A Last weight accepted

This means that a bird with a weight within the range of reference curve +/- 30 % was registered.

- B Weighing signal

The weighing signal can be observed "live" here e.g. by means of a test weight to be placed on the scale in order to check its accuracy. It does not play a role if the scale shows 60 gr TARE etc. If a weighing procedure starts, the MC 95 software registers what the scale has indicated before and thus, evaluates the weight placed on the scale.

- C Last stable weighing signal

It is shown here whether a weighing signal was constant (stable) for a short time. If this weight is matching the reference curve +/- 30 %, it is registered in Pos. A as the last weight accepted.

2.3 End of growing and cleaning

2.3.1 End of growing

Before starting to catch the birds, take down weighing platform.

It is important to take down the platform before catching the birds and to winch the rope to the ceiling by means of the suspension device for feed and water lines in order to prevent damages.

Caution: Do not tie the wire rope to the feed or water lines to prevent damages to the load cell or the wire rope upon the next lowering of the system.

2.3.2 Cleaning

The largest part of the scale can stand high-pressure cleaning without any problem. The platform is made of water-proof glulam, metal parts are galvanized.

The electronic load cell beneath the ceiling must however never be cleaned by high-pressure. This part should only be kept free from dust with a broom.

2.3.3 Storage

After finishing the growing period, keep the cleaned platform in a dry place.

2.4 Maintenance

Basically, the scale does not need any maintenance, it should, however, **be calibrated once a year.**

2.4.1 Calibrating the scale

Weigher empty

- A The scale has to be correctly connected to the MC 95.
- B Upon installation in the MC 95, "Other" has to be selected as bird weigher.
- C Suspend the platform so that it does not touch litter nor is it swinging.
- D Press key switch.
- E Press **Service**

- F Press **I/O**
- G Press **More**
- H Press bird weigher
- I Now you can read and take down the tension e.g. fed to scale 1 without charge at the entrance.
- J To enter this value now, proceed as follows:
- K Press key switch.
- L Press **Install**
- M Press **Next** (until the next point bird weigher is indicated).
- Q Select **Scale 1**
- R In the menu prompted now enter the value read before (e.g. 0.545 V) in the first column at the top. In the bottom line of this column enter the weight corresponding to this tension. In this case 0 gram.

Weigher with calibrating weight e.g. 10 kg

- A Now place a known weight on the scale (e.g. 10 kg).
- B Press key switch.
- C Press **Service**
- D Press **I/O**
- E Press **More**
- F Press **Scale**
- G Now you can read and take down the tension e.g. fed to scale 1 with 10 kg charge at the entrance of the weigher.
- H To enter this value now, proceed as follows:
- I Press key switch.
- J Press **Install**
- K Press **Next** (until the point bird weigher is indicated).
- L Select **Scale 1**
- M In the menu prompted now, enter the value read before (e.g. 6.321 V) in the second column at the top. In the bottom line of the second column enter the weight corresponding to this tension. In this case 10000 gram.

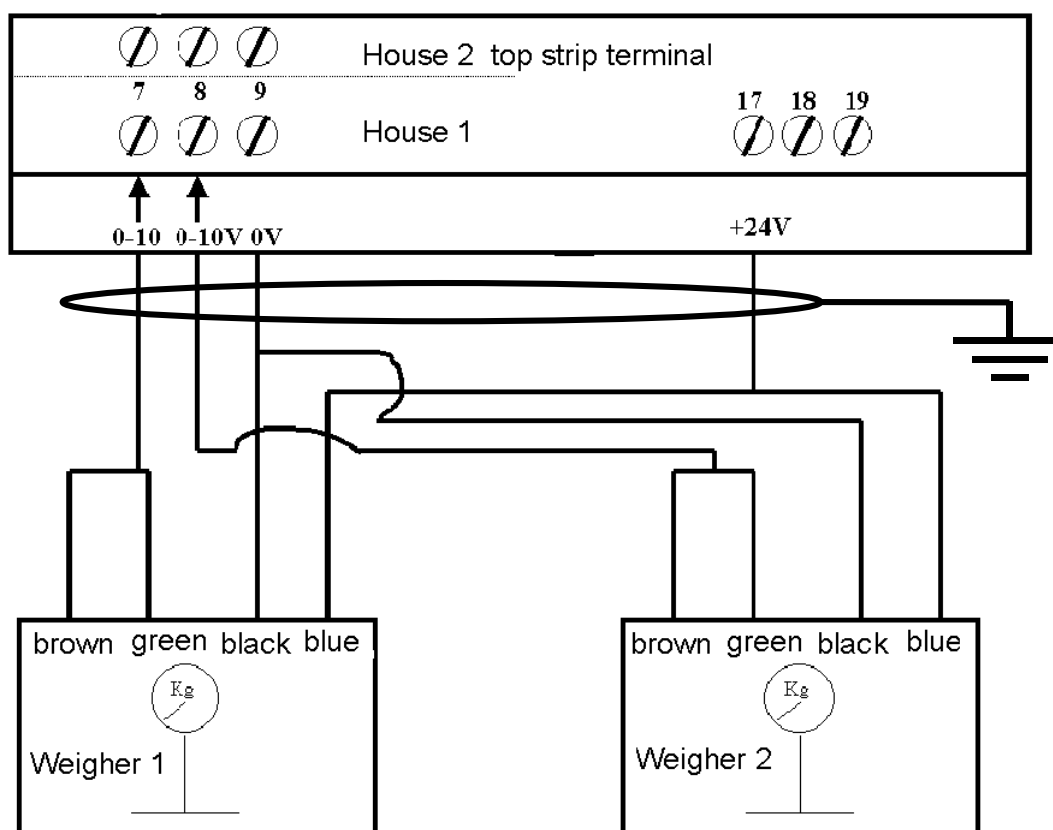
The calibration of the weigher is finished and it can weigh automatically from now on.

2.4.2 How the birds get weighed

The weigher only registers the birds entering the platform. The increase in weight is compared with the reference curve and the weight is stored if corresponding to +/- 30%.

2.4.3 Electrical connection of the weigher (plan of connections)

Connection Swing 20 to MC95 broiler / breeder



The connecting cable (Code No.: 91-02-3584) to connect the weigher to the MC95 must not be laid in the same cable duct nor parallel to other cables causing cross-talk. This also includes light systems controlled by centralized or decentralized ballasts.

Inside the MC95, the shielding of the connection cable (Code No.: 91-02-3584) must extensively be connected with the duly existing ground.

3 Description of the Swing 20

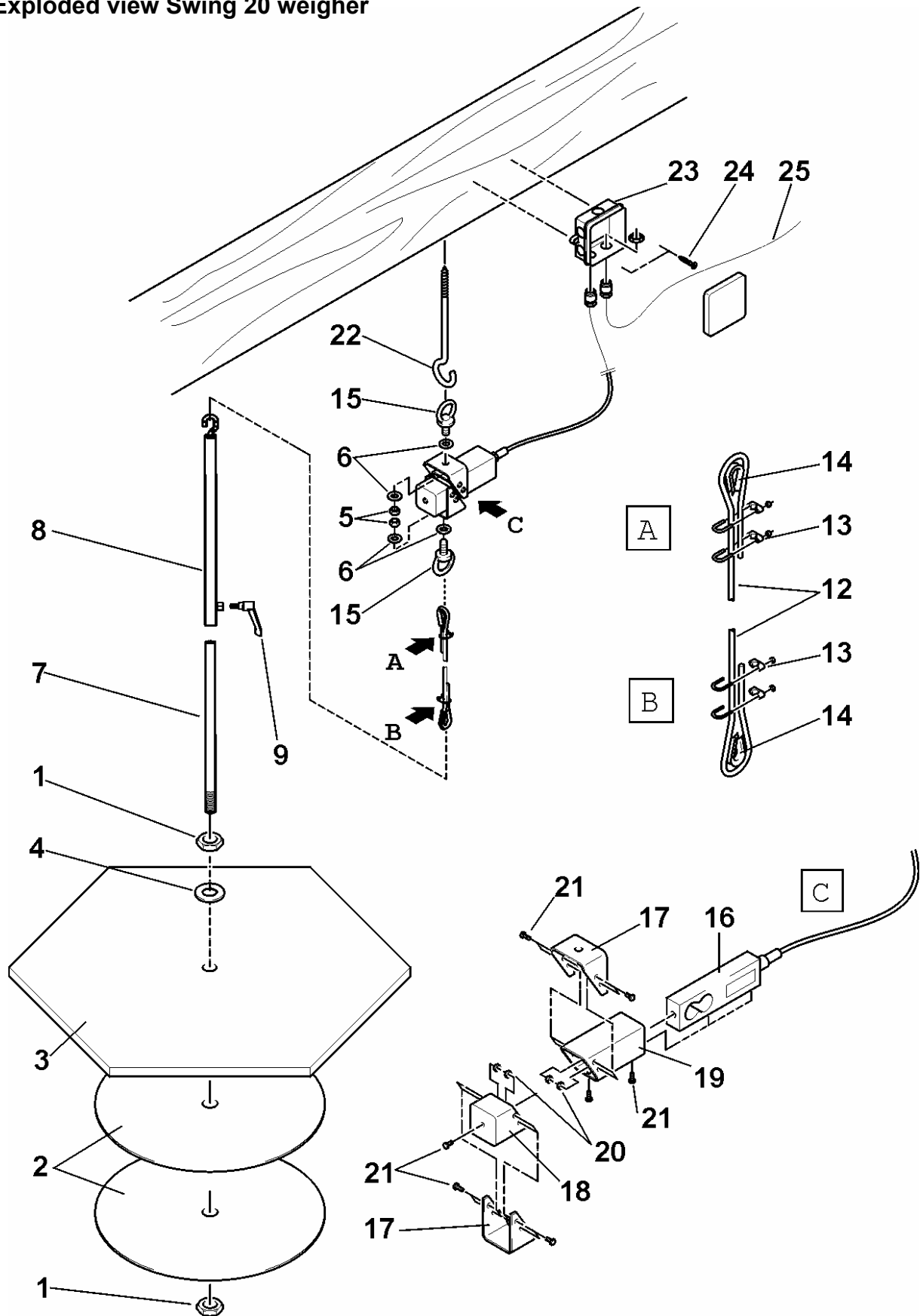
3.1 Parts list

60-45-0210 Bird weigher w/telesc.suspens. Swing-20-Broiler for MC95

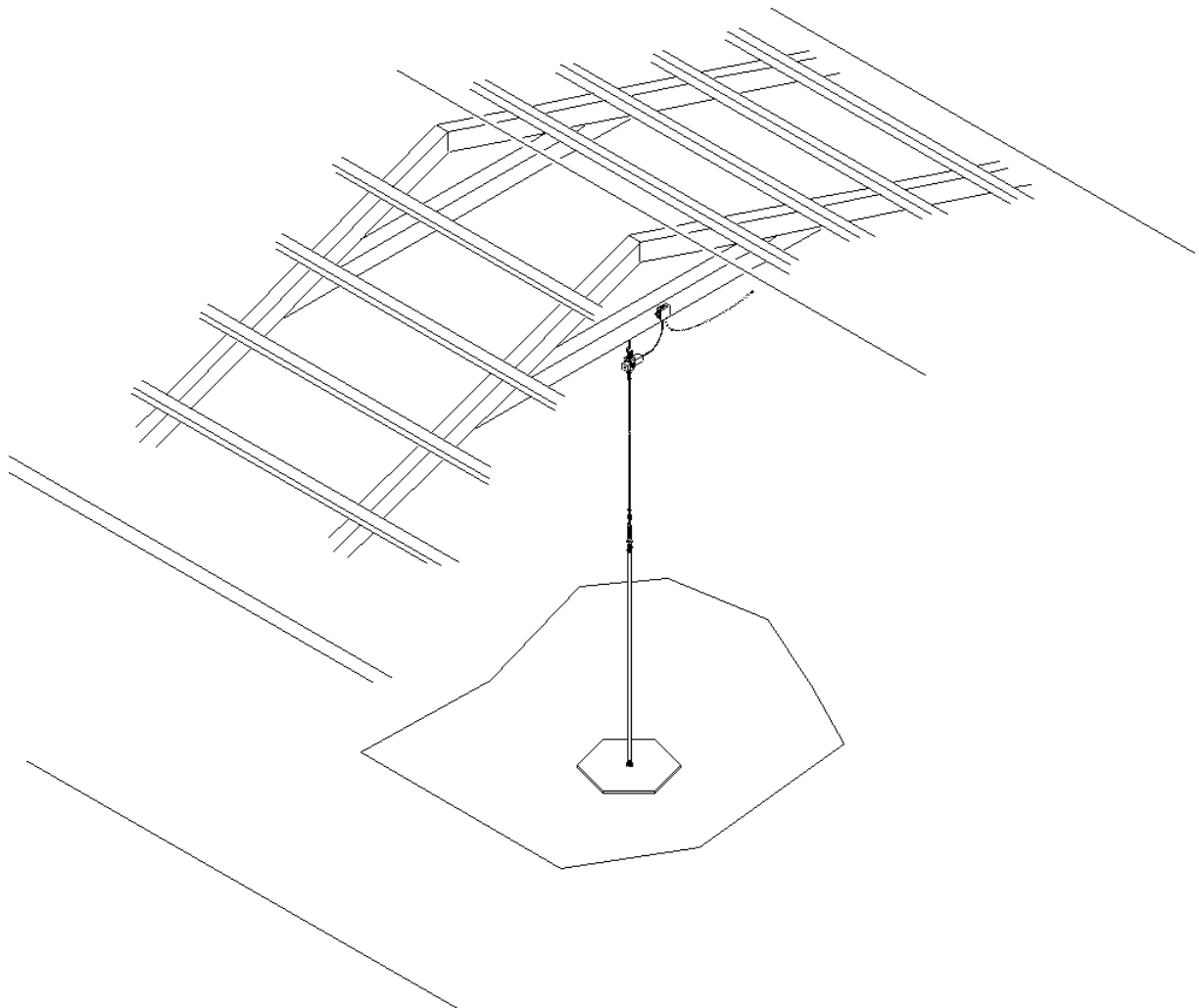
| Pos. | Code No. | Description |
|------|------------|---|
| | 83-01-3419 | Suspension telescopic cpl for bird weigher Swing-20/-20-SA consisting of positions: 1 ;4 ;7 ; 8 and 9 |
| 1 | 99-20-1509 | Hexagon nut 1/2" SST |
| 2 | 83-00-4398 | Weight-plate under weighing plate |
| 3 | 83-00-4396 | Weigh-plate laminated plywood |
| 4 | 99-20-1109 | Washer SST B 21 DIN 125 |
| 5 | 99-10-1040 | Hexagon nut M 8 galv. DIN 934-8 |
| 6 | 99-20-1026 | Washer A 8,4 DIN 125 galv |
| 7 | | lower tube f/ suspension telescopic |
| 8 | | upper tube f/ suspension telescopic |
| 9 | 60-45-0212 | Clamping lever KIPP w/ plastic handle M8x20 SST |
| 12 | 99-50-3703 | Wire rope 4mm galv. |
| 13 | 99-50-0120 | Cable clamp 5mm 3/16" galv. |
| 14 | 99-50-1077 | Thimble 6mm for cable 5mm galv. DIN 6899 NG 6 RW7 |
| 15 | 99-10-1314 | Lifting eye bolt M 8 DIN 580 |
| 16 | 60-45-0000 | Load cell 10-30kg Swing-20 |
| 17 | 83-00-4641 | Hanger |
| 18 | 83-00-4643 | Suspension front incl. cover |
| 19 | 83-00-4639 | Suspension at the back |
| 20 | 99-10-1023 | Hexagon nut M 5 DIN 934-8 |
| 21 | 99-10-1241 | Hexagon head screw M 5x12 DIN 558 |
| 22 | 99-50-3834 | Cup hook galv. 140x22x7,8 |
| 23 | 60-48-4011 | Branch box A8 with 2 screwings PG9 |
| 24* | | Tapping screws |
| 25* | 91-02-3584 | Cable for data LIYCY 4x0,75 (!! with shield !!) |

* not included in delivery

Exploded view Swing 20 weigher

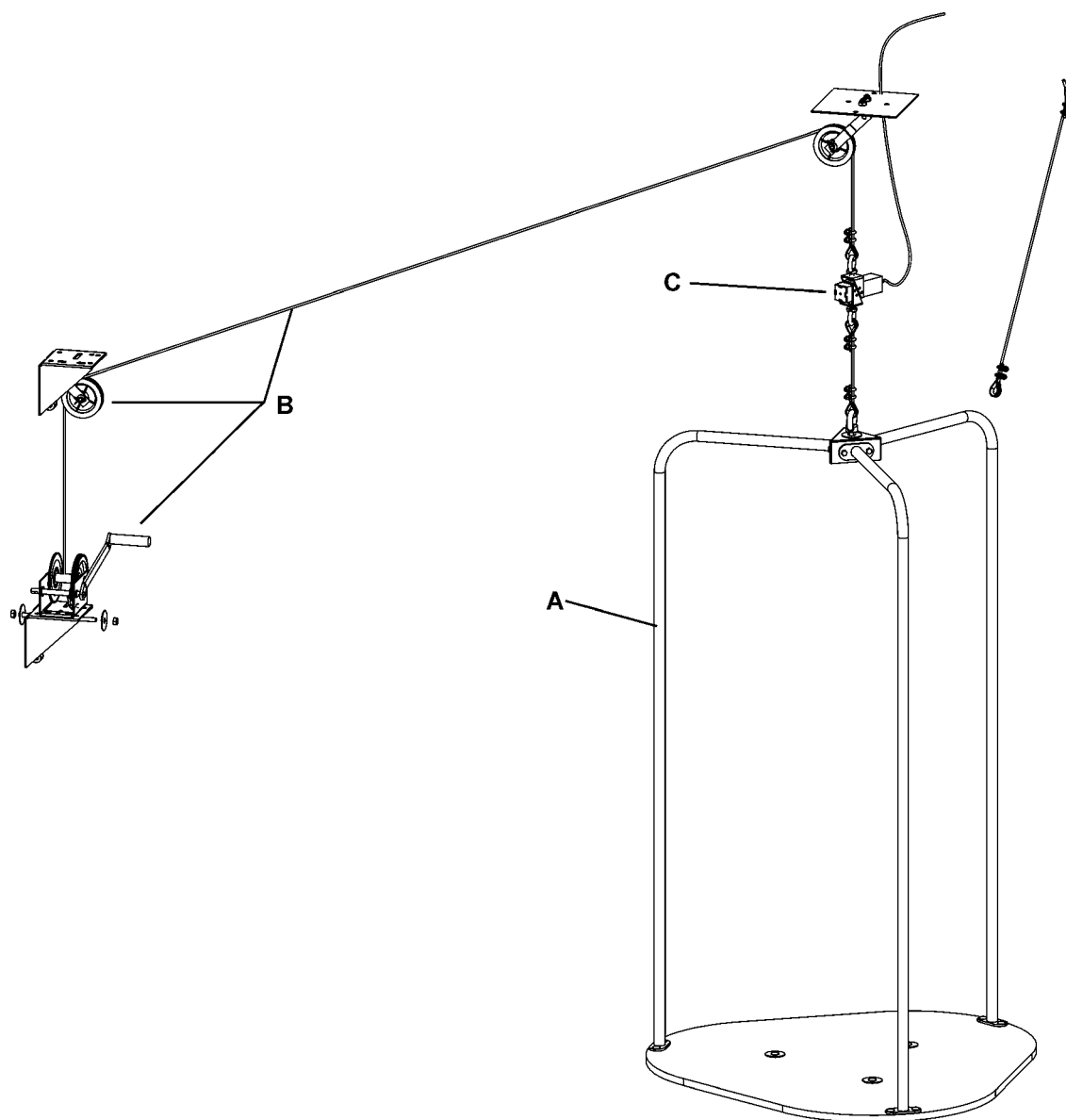


Swing 20 weigher



4 Description of the Swing 70

4.1 Installation of the Swing 70



- A 60-45-0155 Weighing platform for turkeys
- B 60-45-0175 Mounting for Swing-70/-SA incl cable winch
- C 60-45-0171 Load cell cpl Swing-70 for MC95

4.2 Parts list poultry scale system Swing 70

60-45-0170 Bird weigher Swing-70 Turkey for MC95

consisting of:

- A 60-45-0155 Weighing platform for turkeys
- B 60-45-0175 Mounting for Swing-70/-SA incl cable winch
- C 60-45-0171 Load cell cpl Swing-70 for MC95

A 60-45-0155 Weighing platform for turkeys

- 1 83-00-6050 Plattform laminated plywood for turkey weigher
- 2 83-00-6054 Suspension tube 3/4" galv incl mounting flange turkey weigher
- 3 83-00-6052 Mounting for rope suspension turkey weigher
- 4 83-00-6051 Weight-plate 20,3kg for turkey weigher
- 5 99-10-1046 Hexagon head screw M 8x 16 DIN 558 galv
- 6 99-10-1040 Hexagon nut M 8 galv DIN 934-8
- 7 99-10-3827 Mushroom head square neck bolt M 8x 40 DIN 603 galv
- 8 37-80-2011 Washer A 8,4x25x2,0 DIN 9021 galv
- 9 99-20-1064 Self-locking counter nut M 8 DIN 985-6 galv
- 10 20-90-3759 Washer 13,0x50x2,0 galv
- 11 99-10-1274 Hexagon head screw M 12x 30 DIN 558 galv
- 12 99-20-1032 Hexagon nut M 12 galv DIN 555
- 13 99-10-3711 Mushroom head square neck bolt M 8x 45 DIN 603 galv
- 14 99-10-3977 Lifting eye nut M 12 DIN 582 galv
- 15 99-50-3814 Hooked bolt galv 140x6,5
- 16 99-50-1077 Thimble 6mm for cable 5mm DIN 6899
- 17 99-50-0120 Cable clamp 5mm 3/16" galv
- 18 99-50-3700 Wire rope 5mm galv

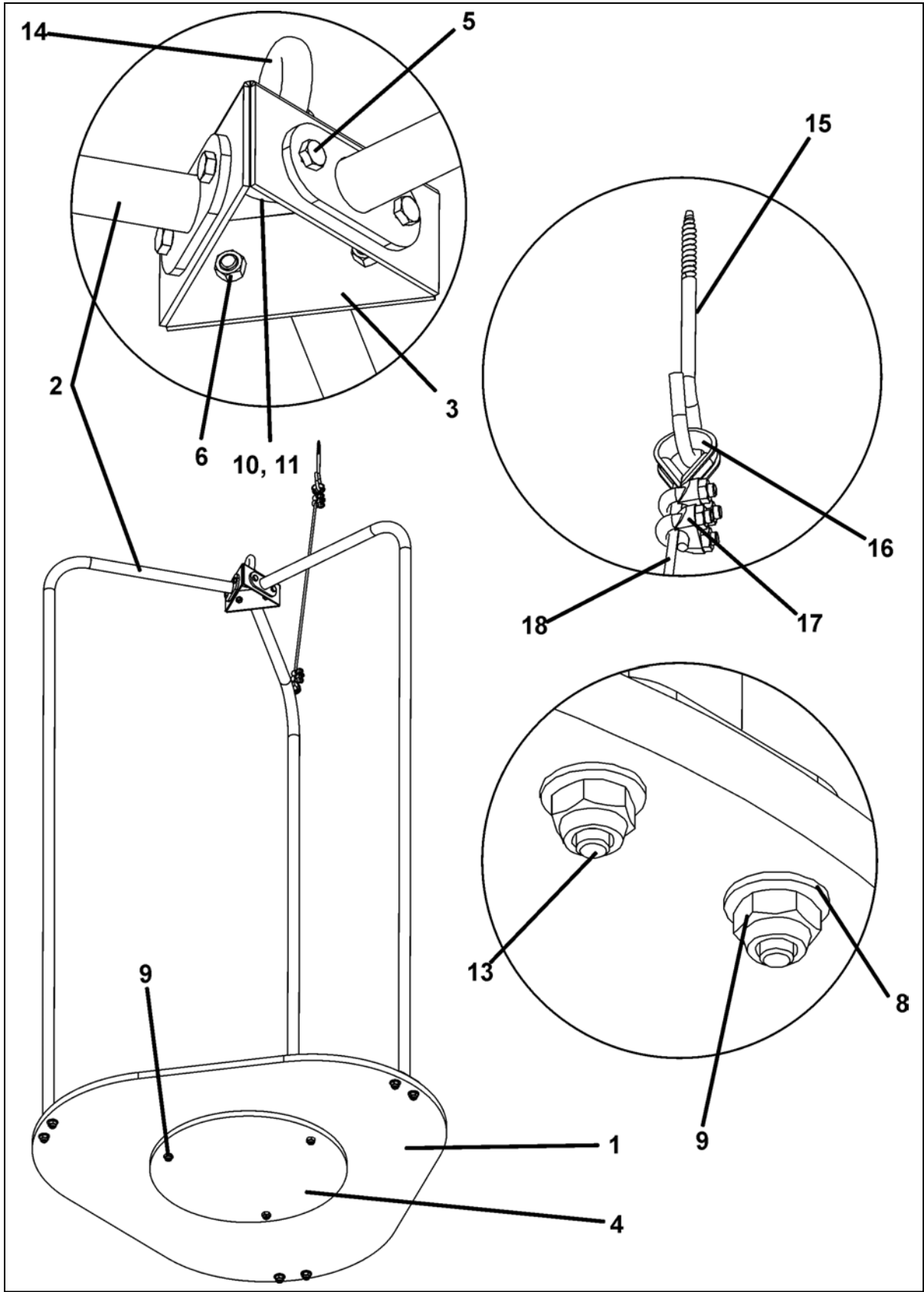
B 60-45-0175 Mounting for Swing-70/-SA incl cable winch

- 19 99-50-1077 Thimble 6mm for cable 5mm DIN 6899
- 20 99-50-3700 Wire rope 5mm galv
- 21 99-50-0120 Cable clamp 5mm 3/16" galv
- 22 99-50-3003 U-bolt galv 8x25/W34/H50
- 23 11-31-3581 Bracket for cable winch 340kg and hopper suspended AM/BP
- 24 99-20-1064 Self-locking counter nut M 8 DIN 985-6 galv
- 25 83-00-0894 Bracket universal for cable winches and pulley 3 1/2"
- 99-98-3783 Dowel S 12
- 99-50-1483 Washer A 10,5x30x2,5 DIN 9021 galv
- 99-10-3832 Hexagon wood screw 8x180 DIN 571-ST galv
- 26 99-10-3710 Rod threaded M10x1000 DIN 975 galv
- 27 20-90-3759 Washer 13,0x50x2,0 galv
- 28 99-20-1029 Hexagon nut M 10 galv DIN 555
- 99-10-1058 Hexagon head screw M 8x 30 DIN 558 galv
- 99-10-1040 Hexagon nut M 8 galv DIN 934-8
- 99-20-1026 Washer A 8,4 DIN 125 galv

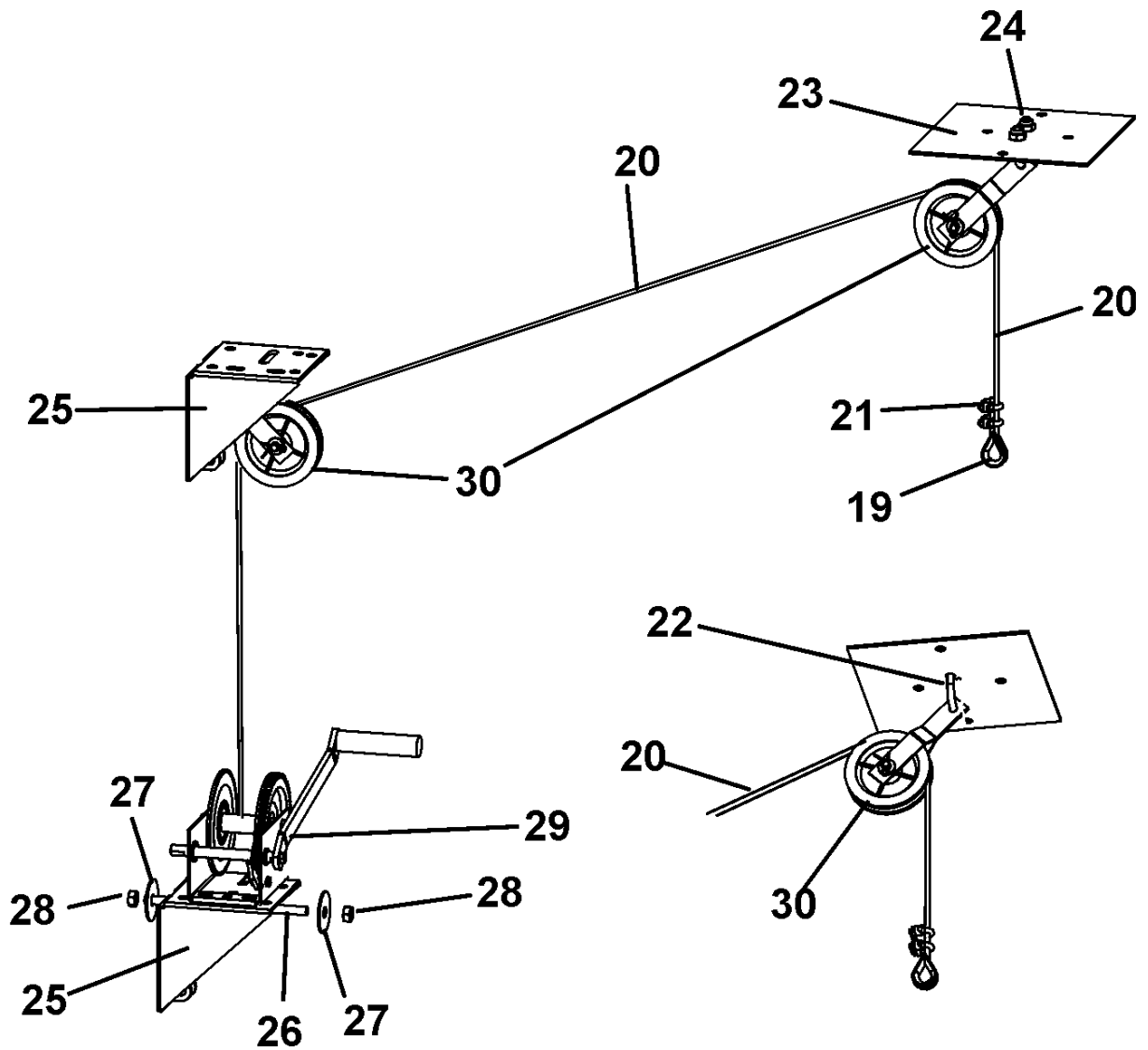
| | | |
|----------|------------|---|
| 29 | 99-50-3099 | Winch 350kg CN-GS for wall mounting incl. crank |
| 30 | 00-00-3005 | Pulley 3 1/2" 89mm |
| C | 60-45-0171 | Load cell cpl Swing-70 for MC95 |
| 31 | 60-45-0100 | Load cell 40-110kg Swing-70 0-10V |
| 32 | 60-48-4011 | Branch box A8 incl. 2 screw unions PG9 |
| 33 | 83-00-6061 | Lifting eye bolt M10 DIN 580 |
| 34 | 99-20-1029 | Hexagon nut M 10 galv DIN 555 |
| 35 | 83-00-4639 | Suspension at the back |
| 36 | 83-00-4643 | Suspension in front incl cover |
| 37 | 83-00-4641 | Hanger |
| 38 | 99-10-1241 | Hexagon head screw M 5x 12 DIN 558 galv |
| 39 | 99-10-1023 | Hexagon nut M 5 galv |
| 40* | | Spax Screws |

* not included in the delivery

A: Drawing: Poultry Scale system Swing 70 - weighing platform



B: Drawing: Mounting for Swing-70/-SA incl cable winch



C: Drawing: Load cell cpl Swing-70 for MC 95

