

POLANIK
Poland, Życzliwa 11
97-300 Piotrków Trybunalski

tel. +48 44 646 44 81
tel. +48 44 648 50 89
fax +48 44 646 43 58

e-mail: info@polanik.com
www.polanik.com



INSTRUCTION MANUAL

Safety cage for discus throw

KLD-5-A



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PRODUCT SUPPORT
Pawel Ciechanowski
p.ciechanowski@polanik.com

Thank you for purchasing POLANIK cage type KLD-5-A.

Safe assembly and use

- Before you start to assemble and use the cage please read this manual carefully, watch the enclosed instruction film and store the manual in a safe place for further reference. Polanik Sp. z o. o. shall not be liable for any cage damages which are the result of the failure to follow this manual.
- Unauthorized copying of this manual, in whole or in part, is prohibited.
- The contents of this manual are subject to change without notice.
- **Warning!** The sports equipment produced by Polanik Sp. z o. o. is designed for athletics training and use in sports competitions only. Please pay special attention especially when using throwing implements and other throwing equipment, misuse of athletics equipment and implements can cause serious injury or in extreme cases even death. That is why training and use during sports events have to be always supervised by authorized sports personnel. In no event shall Polanik Sp. z o. o. be liable for any special, incidental, indirect or consequential damages in connection with the purchase or use of POLANIK products or costs over the original cost of the product.
- Specific warranty terms:
 - 1) The use of the throwing cage (KLD-5-A) is to be done in the properly marked and secured sports facility designed for that purpose and under supervision of qualified coaches, and according to: the rules of the International Association of Athletics Federations (IAAF), respective national athletics federation and local safety regulations. Failure to follow the above restrictions results in loss of the warranty rights.
 - 2) The throwing cage (KLD-5-A) is designed to protect the spectators against the improperly released discus which misses the cage mouth. The execution of that task brings a risk of damages to the cage elements (for example the pillars), as a crumple zone of an automobile is damaged to absorb energy from the impact during an accident to save passengers. The damages caused by the proper cage operation, which is stopping improperly thrown discuses from flying outside the cage and absorbing the impact energy in order to protect the thrower inside the throwing circle, are recognized as a normal wear of the product and are excluded from the warranty. The damages can be removed in course of payable repair or replacement of the cage elements.

Contents

Chapters	Page
Safe assembly and use	2
I. Characteristics of KLD-5-A	3
II. Parts (part sets) list	4
III. General assembly description	5
IV. Anchors – placing in concrete	5
V. Pillars installation	5
VI. Net hoisting	7
VII. Final adjusting	8
VIII. Maintenance and periodical inspection	8
IX. Technical drawings	
Drawing no. 1 – Cage pillar	10
Drawing no. 2 – Foundation block	11
Drawing no. 3 – Plan of the foundation blocks for cage pillars	12
Drawing no. 4 – Installing pillars	13
Drawing no. 5 – Assembled cage	14
X. Images	
Image 1 – Extreme anchor with reinforced arm	15
Image 2 - Anchor	15
XI. IAAF Certificate	16
XII. How to play the attached instructional video	17

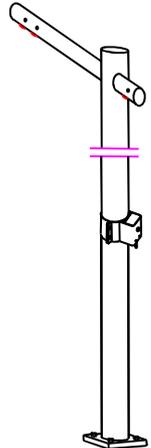
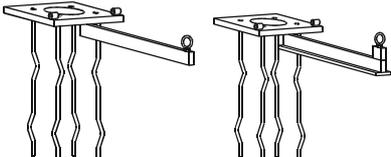
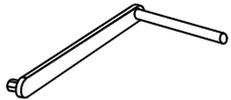
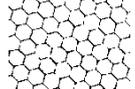
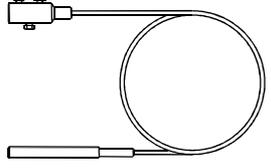
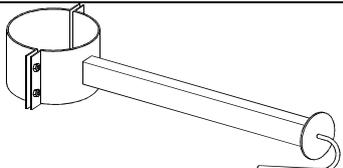
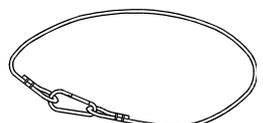
I. Characteristics of KLD-5-A

The safety cage for discus throwing is a modern construction made of high quality materials. Main characteristic features of the cage are as follows:

1. Innovative construction:
 - Net is hung in such a way that it does not touch the aluminium structure in any point.
 - Cage pillars are not linked with each other by means of inflexible elements, that is why they work independently.
 - Application of anchors (instead of popular sockets) eliminates rusting caused by water penetration in the lower parts of the cage.
2. High durability:
 - Cage construction is made of aluminium which is anodized in silver colour.
 - All tube ends are protected with plastic caps. They stop water from getting inside the construction and provide good finish and appearance.
 - Steel elements are hot galvanized or electro-galvanized. All ratchet mechanism casings are additionally coated with powder paint.
3. High quality:
 - Cage is an IAAF certified product.
 - Cage is equipped with high quality, certified net. Net is strained and fastened at the cage bottom by means of steel cable and hooks. That lets us eliminate traditional bags filled with sand.
4. Easy operating:
 - Cage can be assembled and disassembled without using a crane or an extension arm. Assembly (or disassembly) takes approximately 3 hours done by 3÷4 people.
 - Pillars are fastened to anchors embedded in concrete. That system of pillar installation enables you to dismount the cage and cover the anchor foundations with synthetic surface in order to use the ground for other purposes.
 - Each pillar is equipped with the self-blocking mechanism of lifting and lowering the net by means of crank.

We deliver the cage to a customer in partially assembled units. Assembly should be conducted according to this manual and enclosed instruction film.

II. Parts (part sets) list

Item	Part/set description	Q-ty Pcs.	Material	Draw. no.	Part/set sketch
1	Pillar (length approx. 5 m)	9	Anodized aluminium and electro-galvanized steel	1, 2, 5	
2	Anchor (7 pcs) + extreme anchor (with reinforced arm – 2 pcs) + screw M 20x50 (36 pcs) + washer 20 (36 pcs) + screw with eyelet M 10x40 (7 pcs)	7+2	Electro-galvanized steel	1, 2, 3, 4, 5	
3	Hinge axle \varnothing 11 x 350	1	Electro-galvanized steel	4	
4	Crank	2	Electro-galvanized steel	1, 2, 5	
5	Net with rim white rope	1	polypropylene	5	
6	Bottom net tension cable +nut M 16 (1 pc) + washer 16 (1 pc)	1	Electro-galvanized steel	5	
7	Net hooks	100	Electro-galvanized steel	5	
8	Side arm + screw M 8x25 (16 pcs) + nut M 8 (16 pcs) +washer 8 (16 pcs)	4	Electro-galvanized steel, powder painted	5	
9	Horizontal stay rope length ~1,6 m	7		5	

III. General assembly description

The sequence of the assembly operations is described in detail in the next chapters of this manual.

We ship the cage to a customer in partially assembled units. Extension arm with rollers and ratchet mechanism is already installed in each cage pillar (item 1) (see drawing no. 1, 2 and 5). The cage construction consists of 9 pillars 5 m high (item 1, drawing no. 1, 2 and 5). Pillars are fastened to anchors (item 2, drawing no. 1 and 2), which are embedded in concrete according to the plan of the foundation blocks – drawing no. 3. The anchors should be positioned in concrete in such a way that their hinges and arms face the throwing circle. Installed pillars constitute the main structure of the cage which is ready for affixing the net and hoisting it.

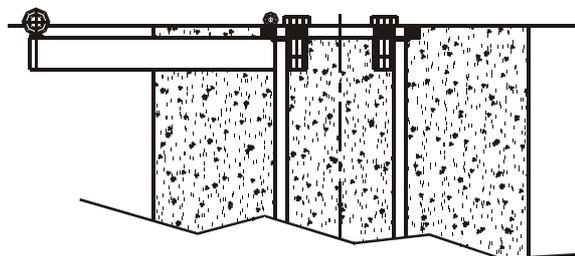
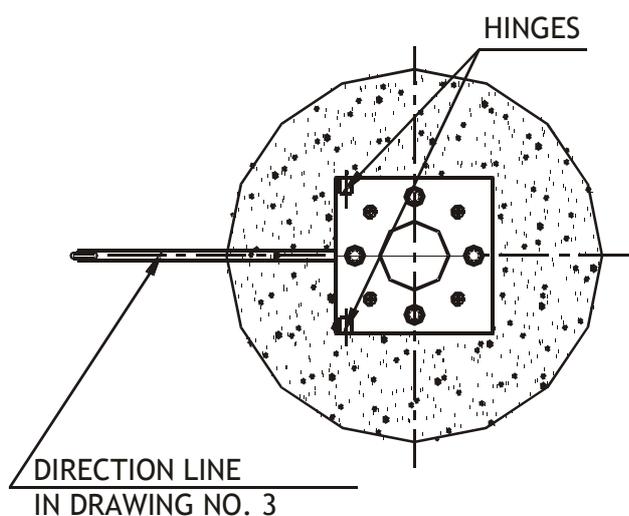
IV. Anchors – placing in concrete

The anchors should be positioned in concrete so that **their hinges arms face the throwing circle**.

Attention! All anchors (item 2, drawing no. 1, 2, 3 and 4) must be embedded in the foundation blocks in such a way that their upper surfaces are exactly horizontal, then pillars will be precisely in vertical position. **Each anchor must be fixed according to the direction marks, see drawing no. 3**. During the embedding process please make sure that the screws situated in the upper plates of the anchors are fully screwed down and their threads are well protected by rubber sleeves. If concrete plasters the threads of the screws it will be impossible to install the pillars. Foundation blocks are shown below.

TOP VIEW

VERTICAL SECTION



The extreme anchors (item 2, drawing no. 3 and 5, image 1) have got special reinforced arms for installing the bottom net tension cable (item 6). All supplied anchors are ready for embedding (screws are fully screwed down and their threads coated with rubber sleeves).

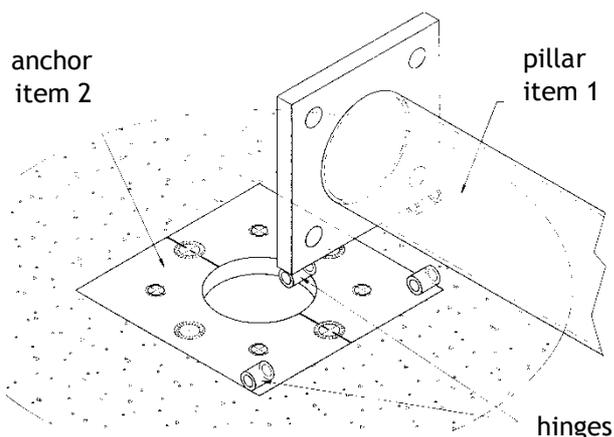
V. Pillars installation



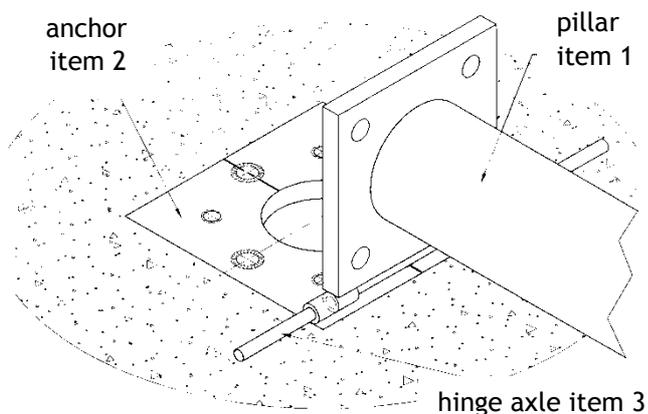
WARNING: failure to follow the sequence of these assembly operations could result in serious accident or damages to the cage construction.

The installation of pillars (item 1) on anchors (item 2) is done in the following way: we unpack delivered pillars, then we remove blocking screws (M 8x16) from the ratchet mechanisms and loosen steel lines, next the lines should be unwound a little and their ends ought to be temporarily fastened to pillars at the level of ratchet mechanisms (drawing no. 1), after that pillars should be installed one by one according to the sequence shown on the next page.

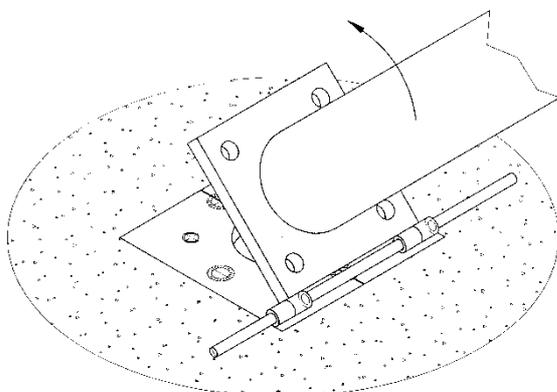
Before you put the pillars that are linked to the extreme anchors (item 2, drawing no. 3 and 5, image 1) in their upright position, side arms (item 8) should be fastened to them. Two side arms (item 8) must be installed on each extreme pillar, one side arm at the height of ~2,2 m and the other one at the height of ~4 m (see drawing no. 5). The heights are marked on each extreme pillar with blue label bands.



Stage one
Position the pillar in the anchor hinges.

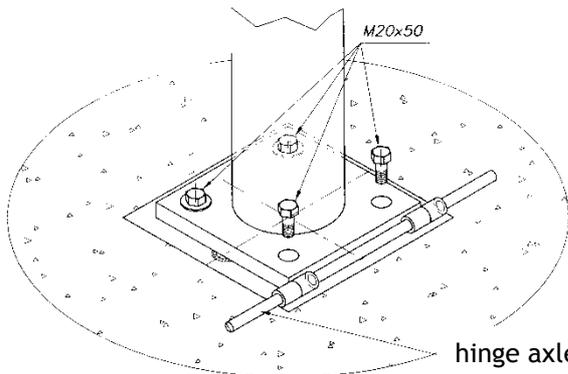


Stage two
Slide hinge axle (item 3) into the anchor hinges.



Stage three
Lift the pillar to vertical position.

Stage four
While one man is supporting the pillar in upright position, the other person is screwing it to the anchor



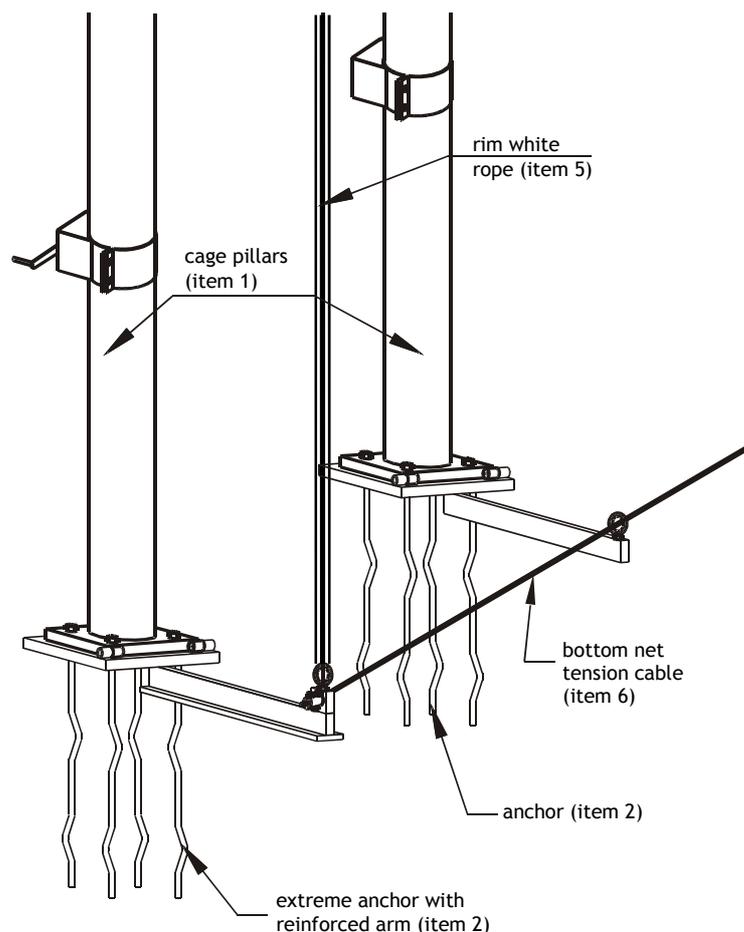
hinge axle item 3

in the following sequence:

- screw down two screws (M 20 x 50) opposite the anchor hinges,
- then screw down two remaining screws (M 20 x 50) next to the anchor hinges,
- remove hinge axle (item 3).

VI. Net hoisting

The installed pillars constitute the main cage construction which is ready for installing and hoisting the net. Firstly bottom net tension cable (item 6) ought to be threaded through the eyelets which are located in the arms of anchors (item 2), see the diagram below. Cable regulating screw will help us to strain it.



When we complete these preliminary works, the net can be laid down on its circumference according to drawing no. 3. Then we begin with attaching it to the steel ropes of the pillars by means of special catches. One end of each steel rope is fixed permanently to the bobbin of the ratchet mechanism and the other one, which has been temporarily fastened to the pillar, should be now untied and attached to the net. That operation is repeated at each pillar. After linking the net with steel lines of the pillars, we can hoist the net. The lifting of the net should be executed

successively by approx. 2 m at each pillar and ought to be continued up to the maximum height except the extreme pillars, at which a space of approximately 20 cm before the maximum height must be left. **Do not lift the steel ropes of the pillars without the net – it may not be possible to lower them without the appropriate load.**



Next we put the net edge under the bottom net tension cable (item 6), strain the net and fix its edge to the meshes with supplied net hooks (item 7, drawing no. 5).

Then we lift the net at the extreme pillars all the way to the maximum height using the crank mechanism. Now the side edges of the hoisted net have to be tightened. In order to do that, we put the ends of the rim white rope (item 5) through the eyelets of extreme anchors (item 2). The ends of the rope should be strained and tied up. After that we hook the rim net rope on the side arms (item 8) that have been installed earlier (see Chapter V.). **That way the net surface will not touch the aluminium elements of the cage construction in any point - it is extremely important for correct impact absorption and pillars' life.**



In order to provide proper net position (during strong winds the net may deflect from the required projection like a sail) horizontal stay ropes 1,6 m long (item 9) are supplied. The net is tied to each pillar (except for the extreme pillars) at 2m from the ground. **Please make sure that the rope loops around the pillars are loose enough to provide easy sliding. That allows you to lower the net smoothly to its idle position – max. 1/3 of its height, which is recommended for breaks in competitions or training periods, and especially during strong winds.**

VII. Final adjusting

The ratchet mechanisms of the pillars should be blocked with screws (M 8 x 20) or padlocks. That secures the net against accidental loosening. The cage is ready for use provided that the above operation is completed.

VIII. Maintenance and periodical inspection

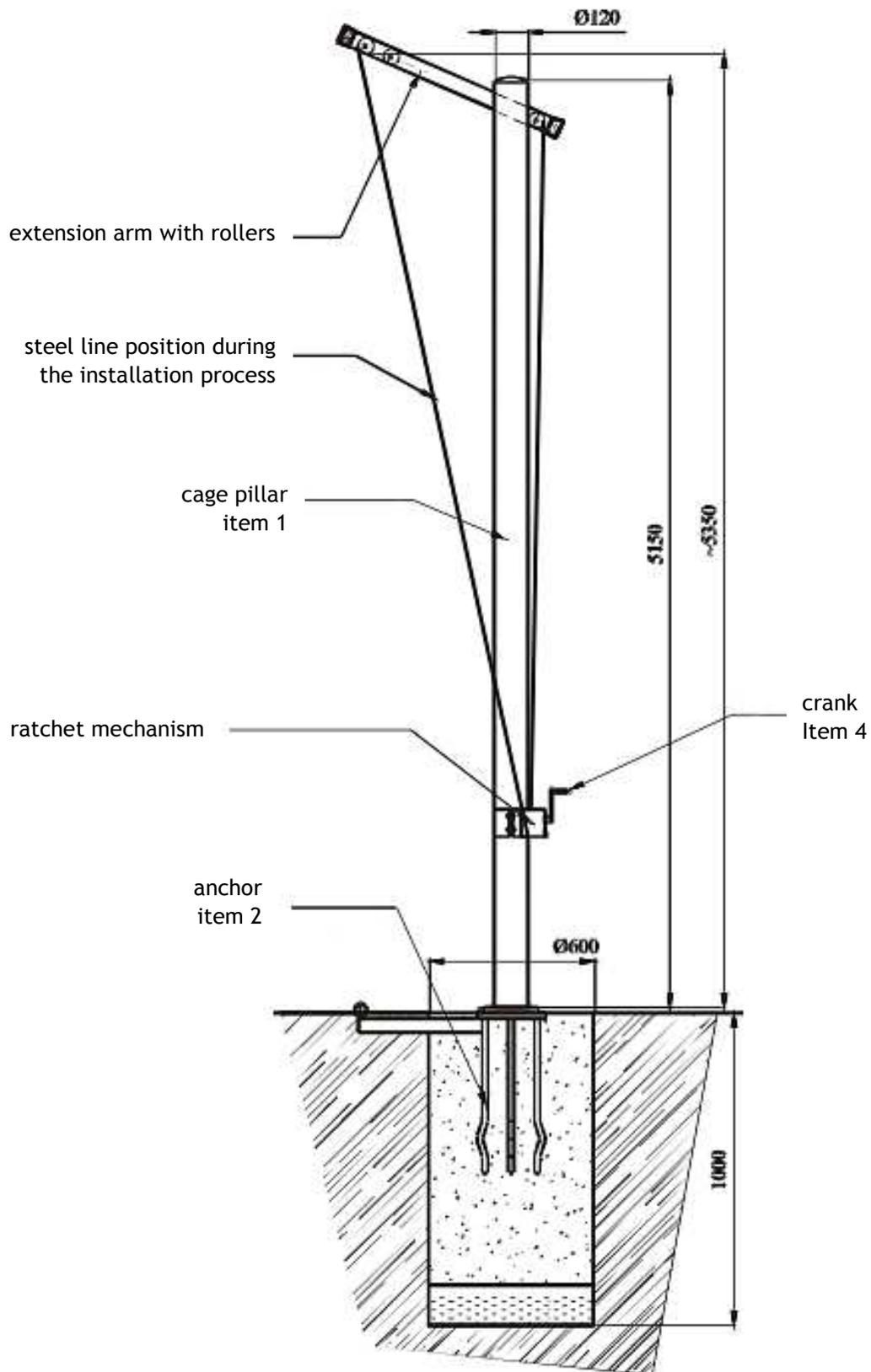
As the producer we have done our best to make the cage guarantee maximum safety level, be easily operated and reliable in use. However the cage like any other pieces of sports equipment requires periodical inspections and must be used according to the instruction manual, the IAAF rules and operated by authorized personnel.

To keep the cage in good condition, the following maintenance operations and periodical inspections should be executed after every athletic season:

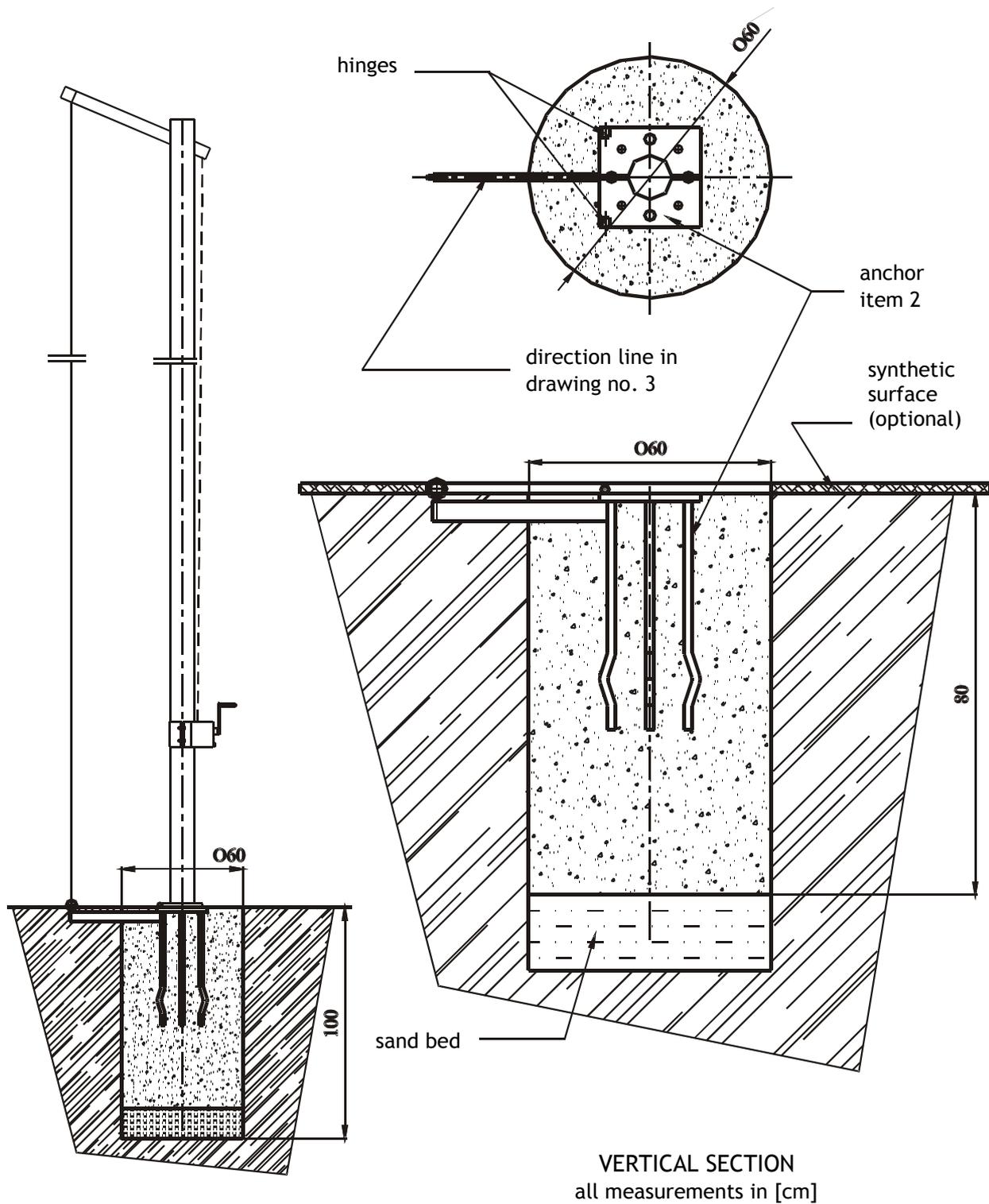
- Check the tensile strength of the net (use the samples) according to the IAAF instructions.
- Clean and grease the steel lines of the cage pillars.
- Remove the cranks. Keep them in safe place for future use.

- Fold the net provided it is dry and tie it. Keep it in safe place.
- The steel lines should be always secured and strained when the net is taken off. It prevents the steel lines from hitting the anodized aluminium surfaces of the pillars.
- **Do not lift the steel lines of the pillars without the net – it may not be possible to lower them if they are not loaded.**
- **During idle periods the net must be absolutely lowered. Lift the net only for using.**
- **In case of strong winds, during which competition throwing events (see the IAAF rules) and training meetings cannot be conducted, the net must be absolutely lowered.**

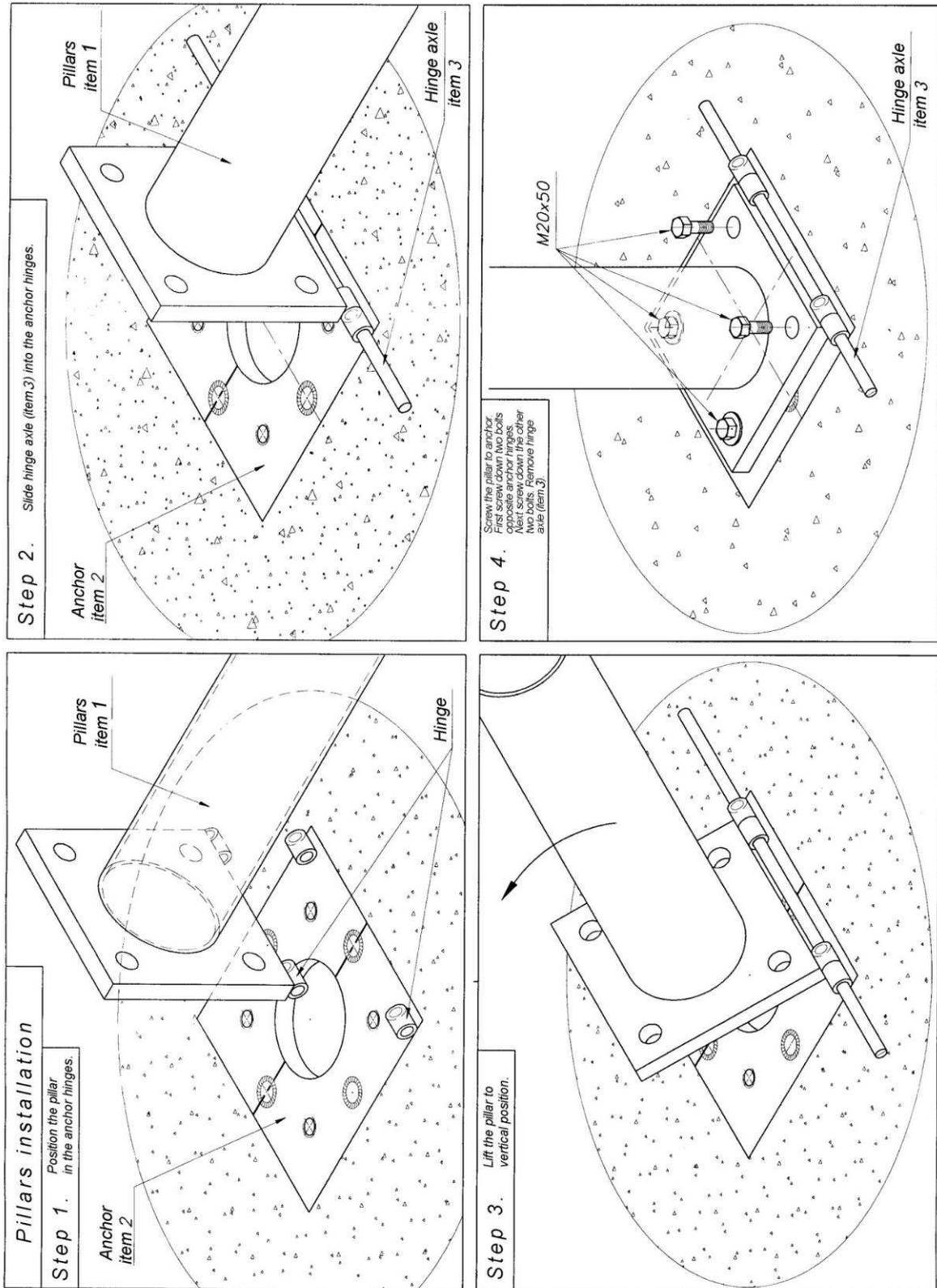
Even the best technical solutions cannot substitute for common sense. Hammer and discus throwing should be taken place under the supervision of qualified trainers. The producer shall not be liable for any incidents caused by improper cage assembly or its misuse.



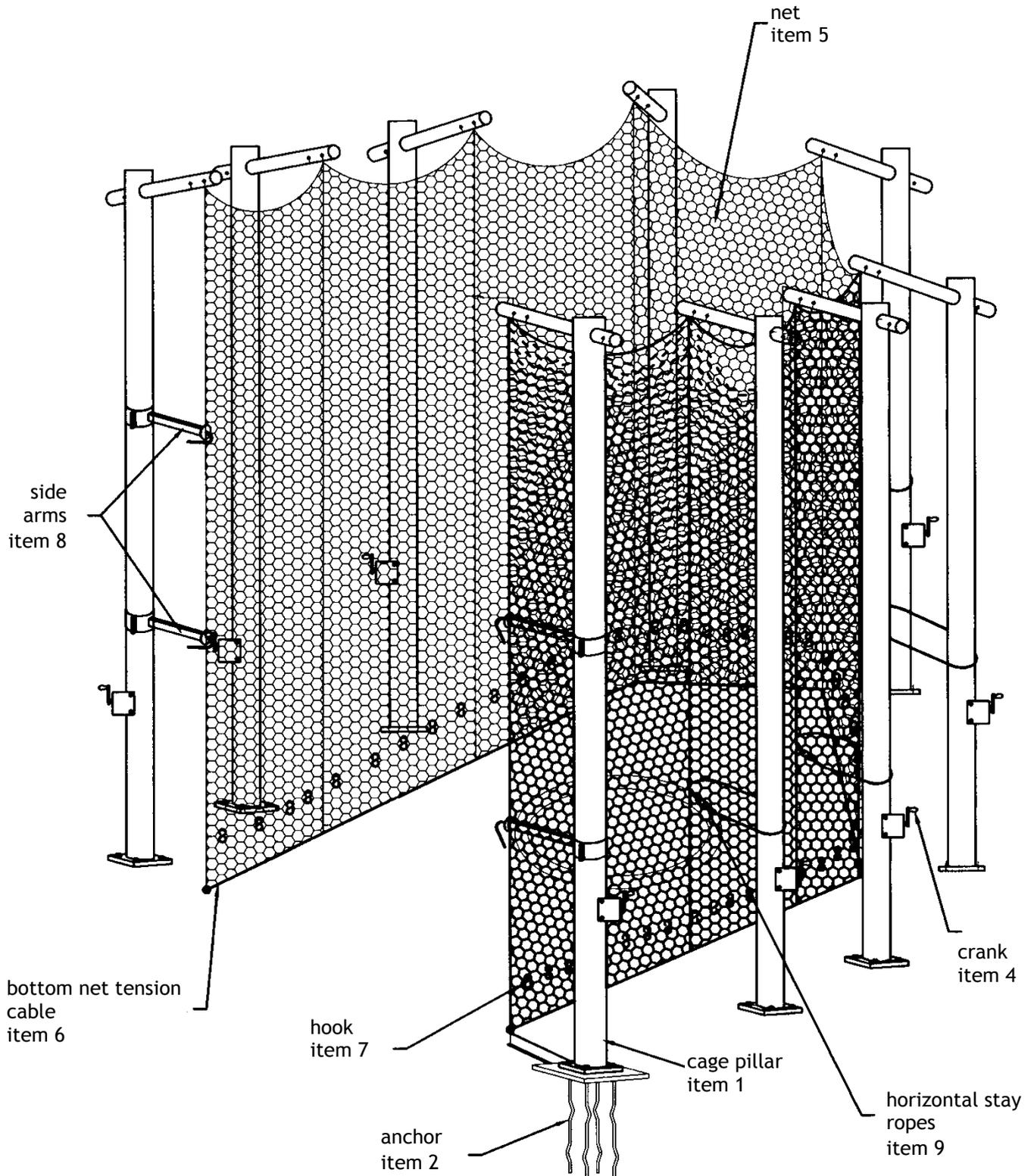
**Cage pillar
Drawing no. 1**



Foundation block
Drawing no. 2



Installing pillars
Drawing no. 4



Assembled cage
Drawing no. 5



Extreme anchor with reinforced arm (2 pcs)
Image 1



Anchor (7 pcs)
Image 2

XI. IAAF Certificate

International Association of Athletics Federations



Product Certificate

*The IAAF is pleased to certify hereby
that the following product:*

Product's Trade Name:	Throwing cage, Discus Throw
Description, Colour / Absolute Thickness:	Anodised aluminium, 5m high, -
Company Name, Country:	Polanik Sp. z o. o. - Sp. K., POL
Catalogue Number:	KLD-5-A
IAAF Certification Number:	E-10-0607

meets the dimensional requirements for use in all international athletics competitions.

It is for the purchaser to determine the item's fitness for the purpose based on his knowledge of the local conditions and use.

Valid from:	1 October 2014
Until the last day of:	October 2018

This certificate is issued in accordance with the terms and conditions of the IAAF Certification System of track and field facilities, implements and competition equipment.



ESSAR GABRIEL
IAAF General Secretary



JORGE SALCEDO
IAAF Technical Committee Chairman



XII. How to play the attached instructional video

Attention!

Since the enclosed instructional CD presents the discus and hammer throwing cage with two movable panels, it should be only used as an general illustration of the installation process.

The enclosed instructional CD can be viewed on VCD/DVD players and PC or MAC computers. If it does not start automatically, please explore CD main directory and click the file with .exe extension.

Minimal hardware requirements:

PC

P166 MMX, 32 MB RAM, CD-ROM, VIDEO CARD
WINDOWS 9x, NT 4.0, 2000, WINDOWS MEDIA PLAYER

MAC

QUICK TIME PLAYER WITH QUICK TIME MPEG EXTENSION