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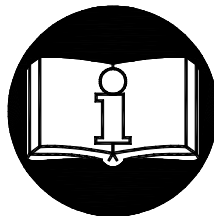
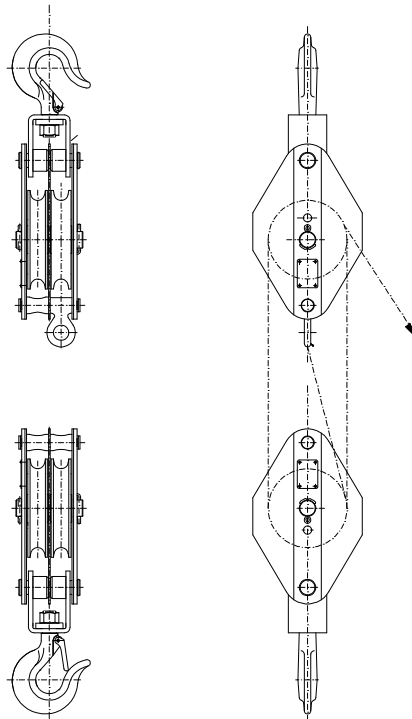
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**OPERATION MANUAL  
SAFETY PRINCIPLES, OPERATION AND MAINTENANCE  
FOR**

**GENERIC CHAIN BLOCKS**

**Types: K10, K11, K12, K15**

**Lifting capacities 0,3t to 6t**



Read carefully this manual before using this product. This manual contains important information on use, safety, installation, operation and maintenance of the product.

Make this manual available to all responsible persons.

**Keep for further use!**

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# 1 DEFINITION

**! DANGER**      **Danger** is used to indicate the presence of hazard, which will cause death or severe injury, if the warning is ignored.

**! WARNING**      **Warning** is used to indicate a possible hazard, which could cause death or severe injury, if the warning is ignored.

**! CAUTION**      **Caution** is used to indicate a possible hazard, which could cause light injury, if the warning is ignored. Caution can warn against dangerous practices as well.

**Lifting capacity (Q):** indicates the maximum permitted mass of a load (working load limit), for which the chain block is designed to be loaded by during operations under conditions defined in this manual.

## 2 DEVICE PURPOSE

2.1 The generic chain blocks of the K10, K11, K12, K15 **types of lifting capacities from 0,3t to 6t** (hereinafter referred to as the „chain blocks“) has been designed for lifting or pulling of loads in any directions. They are destined for general application as portable tools when performing of assembling, repairing and other works. The chain blocks of the K10-12 types are destined for textile ropes, K15 type for steel wire ropes (ropes are not a part of the delivery). The load mass or resulting rope pull shall not exceed the specified nominal lifting capacity.

2.2 The chain blocks has been designed to meet requirements provided by the Directive 2006/42/EC of the European Parliament and of the Council as amended by the Czech technical regulation – ministerial order No. 176/2008 of the Coll. of Laws as amended as well as requirements of the ČSN EN ISO 12100-1, ČSN EN ISO 12100-2, ČSN EN 14121-1 and ČSN EN 13157+A1 harmonized technical standards.

## 3 SAFETY PRINCIPLES

### 3.1 SAFETY SUMMARY

Danger exists when lifting loads, particularly when the chain block is not used properly or is poorly maintained. Since an accident or serious injury could result, special safety precautions apply to the operation with the chain block during its assembly, maintenance and inspection.

#### **! WARNING**

**NEVER**      use the chain block for lifting and transporting people.

**NEVER**      lift or transport loads over or near people.

**NEVER**      load the chain block more than the lifting capacity shown on the chain block nameplate.

**ALWAYS**      ensure safe holding the load in a stable position after termination of the manipulation.

**ALWAYS** make sure the load carrying structure will provide adequate support to handle fully loaded chain block and all the lifting operations.

**ALWAYS** let people around to know when a lift is about to begin.

**ALWAYS** read operation manual and safety instructions.

Keep in mind that binding, lifting and pulling techniques are the responsibility of the operating staff. Therefore check all applicable national directions, regulations and standards for further information on the safety use of your chain block.

## 3.2 SAFETY PRINCIPLES

### **! WARNING**

#### 3.2.1 Prior to use

**ALWAYS** ensure physically fit, qualified and instructed persons over 18 years of age familiarized with this manual and trained in safety conditions and way of work operate the chain block.

**ALWAYS** check the chain blocks daily before use according to the section 8.1.(2) „Daily inspection“.

**ALWAYS** make sure the length of the rope is long enough for the intended work.

**ALWAYS** ensure the carrying rope is clean and undamaged.

**ALWAYS** make sure the carrying rope is firmly fastened to the shackle of the upper pulley block.

**ALWAYS** make sure the rope is properly drawn on the grooves in the pulleys.

**ALWAYS** make sure the pulleys in the upper and lower pulley blocks are free to rotate.

**NEVER** pull loads firmly imbedded or of unknown weight.

**NEVER** pull without knowledge of necessary tensioning forces.

**NEVER** use damaged or worn out chain block.

**NEVER** use chain block with jumped out, damaged or missing hook safety latch.

**NEVER** use chain block without visible marking of the lifting capacity.

**NEVER** use modified or deformed hooks.

**NEVER** use chain block marked by the label „**OUT OF OPERATION**“.

**NEVER** perform modifications of the chain block (e.g. welding) without consulting the manufacturer.

**ALWAYS** consult the manufacturer or his authorized representative, if you plan to use a chain block in non-standard or extreme environments.

#### 3.2.2 When in use

**ALWAYS** make sure the load is properly seated in the hook.

**ALWAYS** make sure the safety latches of hooks work in the correct way.

**ALWAYS** pay attention to the limit positions.

**ALWAYS** when manually lifting loads approaching the nominal lifting capacity of the chain block, we recommend, regarding the operating forces, the operation was ensured by two persons.

**NEVER** use fouled or damaged rope.

**NEVER** use chain block for anchoring loads.

- NEVER** allow swinging the load, causing impacts or vibrations.
- NEVER** hitch load on the hook tip.
- NEVER** pull the rope over any edge.
- NEVER** weld, cut or make other operations on suspended load.
- NEVER** connect other parts for rope lengthening (textile one). Never lengthen steel wire ropes by attachment of other part by means of clamps.
- NEVER** use steel wire ropes for K10, K11, K12 chain blocks types.

**Safety principles, methods of use and check for rope with hook (they are not a delivery subject) are defined in separate operation manual supplied with every rope.**

### 3.2.3 After use

- NEVER** leave a load suspended.
- ALWAYS** ensure the jack against incompetent use.

### 3.2.4 Risk analysis

The analysis of possible risks in light of design, operation and environment of the chain block application is presented in the freestanding document „Risk analysis“. This document can be required in service centers.

### 3.2.5 Maintenance

- ALWAYS** enable qualified persons to inspect the chain block regularly.
- ALWAYS** ensure the carrying rope was clean and undamaged.
- ALWAYS** ensure the sliding parts were greased enough.
- ALWAYS** enable the service centers or qualified persons designated by the user the regular inspection of the chain block.

Only such interventions can be done when maintaining the chain block that are in compliance with requirements of the manufacturer specified in the chapters 10 and 14 of this manual.

**IT IS NOT PERMISSIBLE** to carry out repairs and maintenance in other way than prescribed by the manufacturer. It concerns namely the forbiddance of carrying out modifications on the product without an approval of the manufacturer.

## 4. PACKING, STORAGE AND MANIPULATION

### 4.1 PACKING

4.1.1 The chain blocks are supplied assembled (without rope) and free loaded on pallets.

4.1.2 The following accompanying documentation is a part of the delivery:

- a) Operation Manual
- b) EC Declaration of Conformity
- c) Certificates of Quality and Completeness and Guarantee Card.
  - c1) Guarantee period is stated in the Guarantee Card.
  - c2) The guarantee does not apply to defects caused by infringement of the instructions stated in this Operation Manual and defects occurred owing to improper use and unskilled intervention.
  - c3) The guarantee does not apply also to modifications on the product without an approval of the manufacturer.

- c4) Claim of product defects is carried out according to applicable provisions of commercial code eventually as amended.
- d) List of service centers (for the Czech and Slovak Republics only).

## 4.2 STORAGE

Store the chain blocks in dry and clean stocks free from chemical influences and vapours.

- (1) Always store the chain block without any suspended load.
- (2) Remove all dust, water and impurities from the chain block.
- (3) Lubricate pulleys, pivots of hook and springs of safety latches of hooks.
- (4) Suspend the chain block in a dry place.
- (5) During further use follow instructions of the section 8.1.4 „The chain block occasionally used“.

## 4.3 MANIPULATION

During transportation and manipulation follow the applicable technical regulations and standards for work with heavy loads.

# 5 MAIN TECHNICAL PARAMETERS

## 5.1 DIMENSIONS

### 5.1.1 Chain blocks for textile ropes

Type	Lifting capacity (t)	Pulleys number	Ø of rope max	L min	a	b	D	d	e min	Operating force (N)	Weight (kg)
K10	0,5	1	25	730	72	145	125	36	28	2660	14
K11	1	2	25	930	115	145	125	43	34	2760	19
	2	2	26	1215	125	200	180	50	40	5670	30
K12	0,3	3	10	570	75	65	60	30	24	570	3,5

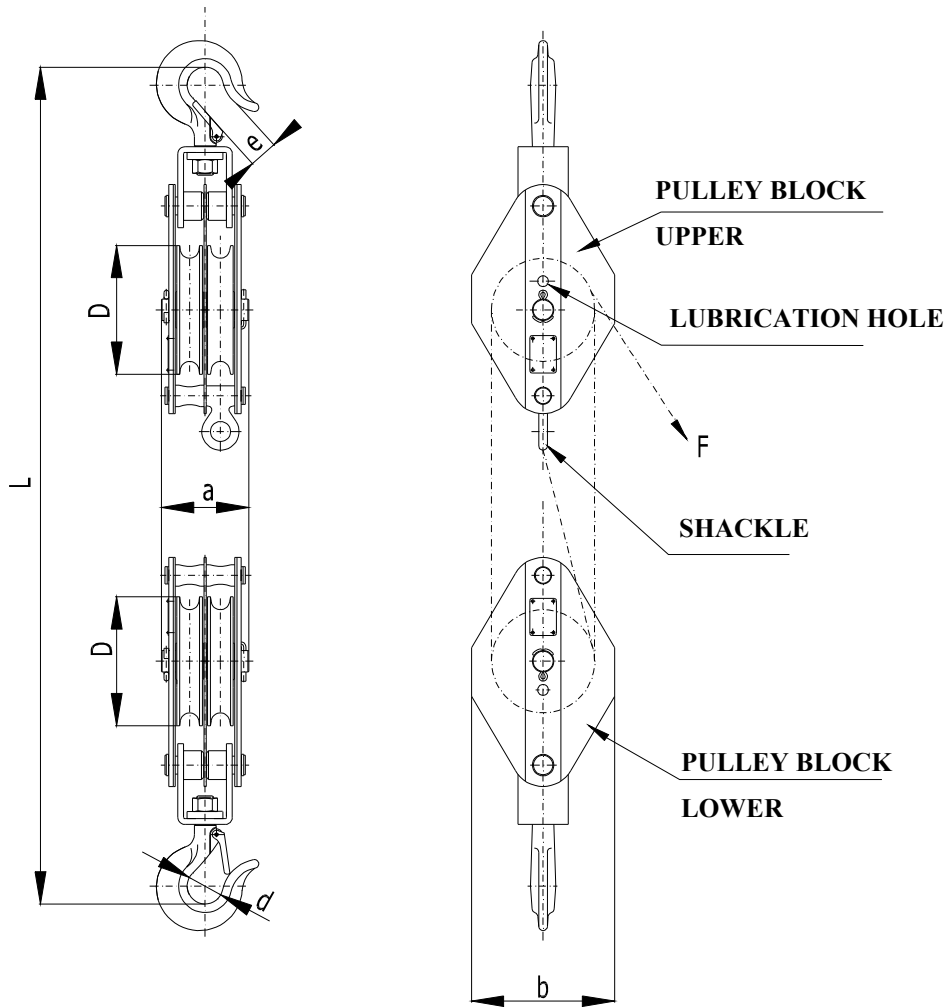
### 5.1.2 Chain blocks for steel wire ropes

Type	Lifting capacity (t)	Pulleys number	Ø of rope max	L min	a	b	D	d	e min	Operating force (N)	Weight (kg)
K15	1	1	12,5	1175	80	200	180	43	28	5620	20
	2	1	12,5	1215	100	250	230	50	34	11260	43
	4	1	20	1410	115	300	280	63	40	22400	54
	6	1	20	1770	145	350	325	80	24	33730	104

**5.1.3** For **K10, K11, K12** chain blocks, **linen ropes with PP insert** with coefficient of safety **7**, are used.

**5.1.4** For **K15** chain blocks, **steel wire ropes according to the CSN EN 12385-4** standards with coefficient of safety **5**, are used.

The minimum diameter of the rope shall be chosen so that the prescribed safety according to the sections 5.1.3 or 5.1.4 is ensured.



## 5.2 DATA ON PRODUCT

Every product is fitted with label with specified data as follows:

<b>Standard design:</b>
Manufacturer's identification
Address of the manufacturer
Type of product
Lifting capacity
Serial number
Year of production
CE marking

## 6 INSTALLATION OF THE CHAIN BLOCK

Prior to installation check the chain block for possible damages.

### 6.1 CHECKING BEFORE INSTALLATION

#### 6.1.1 Load carrying structure

## **! WARNING**

**ALWAYS** make sure the load carrying structure is firm enough to support the weight of the load and the chain block. The installation shall not be provided onto the structure, where carrying capacity cannot be checked.

**ALWAYS the user is responsible for the load carrying structure!**

## **6.2 CHAIN BLOCK SUSPENSION**

### **! CAUTION**

Be careful when suspending the chain block on the suspension element and ensure appropriate conditions for safety installation according to the character of the environment (working platform, auxiliary lifting device etc.) to avoid endangering or injury of persons. Use safety equipment when suspending the chain block in heights to avoid falls from heights.

**User is responsible for creating conditions for installation and performing of the installation of the chain block.**

### **6.2.1 Checking of the rope**

Check whether the rope is not twisted or damaged. Should the rope is twisted turn it back to the correct position. Should the rope is damaged replace it.

## **6.3 TEST PRIOR TO USE**

### **! CAUTION**

- (1) First see again through the previous articles of this manual and make sure all steps were correctly done and all parts are safely assembled.
- (2) Check whether the hooks are properly suspended and safety latches of the hooks work correctly.
- (3) Check over visually whether the load carrying structure or pendant elements are without defects.

## **7 OPERATION**

### **7.1 USE OF THE CHAIN BLOCK**

The chain block is the multipurpose device, determined for lifting, lowering and pulling of loads under normal atmospheric conditions in the workplace.

It is designed for universal usage as portable equipment during assembling, repairing and other works.

Since work with heavy loads may present an unexpected danger, it is necessary to follow all the "Safety instructions" according to the chapter 3.

### **7.2 DESCRIPTION OF THE CHAIN BLOCK**

The chain block consists of two pulley blocks – of upper and lower pulley blocks. Each pulley block has one to three pulleys – see tables 5.1.1 and 5.1.2. On the upper pulley block there is a shackle for fastening of the carrying strand of the rope.

The K10, K11 and K12 chain blocks types are designed for hemp and polyamide (textile) ropes, the K15 chain block type is designed for steel wire rope.

Ropes are not the delivery subject. The maximum diameter of the rope for single types of the chain blocks is defined in the tables 5.1.1 and 5.1.2. The user shall choose the rope according to the lifting capacity of the chain block.



## 7.3 INSTRUCTIONS FOR OPERATING STAFF

### 7.3.1 Putting on the rope

We put on the carrying rope to the chain block so that we will start at the upper pulley block, and then alternately put on the rope to both pulley blocks until all pulleys are roped. We will fasten the end of the rope to the shackle of the upper pulley block so that sufficient safety of the connection is ensured.

At chain blocks of small lifting capacities the pull on the rope can be induced manually, for higher lifting capacities by help of winch, rope-drum or other adequate equipment.

Perform fastening of the rope to the lifting eye by means of three at minimum rope clamps (e.g. DIN 741).

### 7.3.2 The chain block position when pulling

The chain block shall be installed so that the axis of the hook of the upper pulley block and axis of the hook of the lower pulley block were in one straight line.

Before setting (anchoring) of the chain block to the working position we make sure, whether the suspension element is firm enough to support the supposed loading for all the time of the manipulation.

### 7.3.3 Lifting (pulling) or lowering

We perform lifting by means of pulling the free end of the rope. As the chain block has no brake that could hold the load in any position after the interruption of the pulling, the winch or rope-drum shall be equipped with a brake.

The lifting force and lifting speed as well are inversely proportional to a number of carrying cross sections of the rope.

### **! WARNING**

Do not continue to operate if the lower pulley block reaches the maximum or minimum lift. Such cases can cause fall of the load.

When pulling or tensioning load an unexpected move of the load can take place and release and fall of unsecured chain block as well. Therefore be careful.

## 7.4 SAFETY WORKING ENVIRONMENT

### **! WARNING**

- (1) The operating staff of the chain block shall be demonstrably familiarized with this manual, shall follow safety and hygienic regulations and shall be qualified to the operation of this equipment.
- (2) The operating staff must be equipped with helmet, gloves and suitable footwear when operating the chain block.
- (3) Only verified binding means of appropriate lifting capacity are to be used for binding loads.
- (4) When more persons take part in the operation, only one of them must be determined, that is trained in safety work instructions and responsible for manipulation with the chain block.
- (5) The person shall have a clear and unobstructed view of the whole working area still before starting the work. When it is not possible, one or more persons must help to supervise in the nearby area of the chain block.
- (6) The operating staff must check whether the entire work place is safe and whether there is a possibility of escaping from this area in case of endanger before starting to operate the chain block.

(7) During the work with the chain block the suitable distance of the operating staff from the load must be kept. It is prohibited to lift or lower bulky loads preventing to keep sufficient distance.

(8) When operating the chain block in limited area, you must prevent the hook or load do not hit into obstacles or to the chain block body.

## **8 INSPECTION OF THE CHAIN BLOCK**

### **8.1 INSPECTION**

#### **8.1.1 Inspection classification**

(1) Initial inspection: it precedes prior to initial use. All new or repaired chain blocks shall be inspected by a responsible, qualified person to ensure qualified fulfillment of requirements of this manual.

(2) Inspections of chain blocks in regular operation are generally divided into two classifications according to intervals at which should be performed. The intervals depend upon the nature of the critical components of the chain block and the degree of their wear and tear, damage or malfunction. The two general classifications are herein designated as daily and regular ones. The respective intervals are defined as follows:

**(a) Daily inspection:** visual inspection provided by the operating staff designated by the user at the beginning of each usage.

**b) Regular inspection:** visual inspection provided by the qualified person designated by the user.

1) normal operation – annually,

2) heavy operation – twice per year,

3) special or infrequent operation – as recommended by a qualified person at first usage and according to the directions of the qualified employees (maintenance workers).

#### **8.1.2 Daily inspection**

At parts such as those listed in section 8.2(1) “Daily inspection” check whether chain blocks are not damaged or are without any defect. Perform this inspection also during the operation in the interval between regular inspections. Qualified employees shall determine whether any defect or damage can constitute a hazard or more detailed inspection is required.

#### **8.1.3 Regular inspection**

Complete inspections of the chain block perform as recommended regular inspections. These inspections may be performed with the chain block in its normal location and do not require dismantling the chain block. The recommended regular inspection defined in the section 8.2(2) shall be performed under the supervision of competent persons who determine whether the complete disassembly of the chain block is necessary. These inspections shall include the requirements of the daily inspection as well.

#### **8.1.4 The chain block occasionally used**

(1) The chain block that has been idle for a period of one month or more but less than one year shall be put through a detailed inspection conforming to the requirements of the section 8.1.2 before it is placed again in operation.

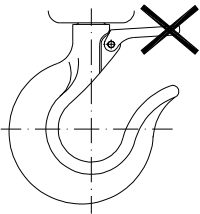
(2) The chain block that has been idle for a period of one year shall be put through a detailed inspection conforming to the requirements of the section 8.1.3 before it is placed again in operation.

### 8.1.5 Inspection record

Always keep the record on the performed tests, repairs, inspections and maintenance of chain blocks. Dated inspection records perform at time intervals specified in sections 8.1.1 (2) (b) and store such records available in the place designated by the user. Defects found by the inspection or recorded during the operation must be announced to the person responsible for safety and designated by the user.

## 8.2 INSPECTION PROCEDURE

### (1) Daily inspection (performed by the operating staff or the competent person)

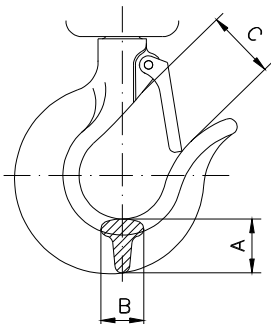
PART	INSPECTION METHOD	LIMIT/CRITERIA FOR DISCARDING	REMEDY
1. Function of pulleys	By rotating of the pulley.	Pulleys seizes, go stiff, make an excessive noise, etc.	Clean pulleys and lubricate pivots.
2. Rope fastening on the shackle of the upper pulley block	Visual check.	End of rope is not sufficiently fastened to the shackle.	Repair of the rope fastening.
3. Hooks (1) Appearance	Visually. 	Safety latch jumped out from the hook top. Bent shank of the hook, other visible hook deformations	Professional inspection of lifting device – putting out of the operation.
(2) Hook rotation	Turn the hook around its axis.	Hook does not rotate fluently or scrub.	Clean and lubricate.
(3) Safety latch of hook	Manual springing of safety latch.	Safety latch does not return after compression.	Clean, lubricate, repair or replacement

**The inspection method for the rope is defined in the separate “Operation Manual” delivered with every rope.**

### (2) Regular inspection (performed by the qualified person)

PART	INSPECTION METHOD	LIMIT/CRITERIA FOR DISCARDING	REMEDY
1. All parts	Visual check.	Worn out or damaged parts.  Fouled and non lubricated parts.	Putting out of the operation.  Dismount, clean, lubricate and assemble again.
2. Name plate	Visual check.	Lifting capacity is illegible.	Repair or replace by the new one.
4. Hooks (1) Deformation of hook (opening)	Measure dimension „C“ by slide caliper.	Measured value is higher than set by the table.	Qualified check of lifting device – putting out of the operation.

(2) Wear and tear of hook	Visual check.	Deformation is visible during visual check. Do not use hook, if the dimensions „A“ or „B“ get smaller by more than 10%.	Putting out of the operation.
	Measure dimensions „A“ and „B“ by slide caliper.		



Capacity (t)	Dimension "A" (mm)		Dimension "B" (mm)		Dimension "C" (mm)
	Standard	Limit	Standard	Limit	Limit
0,3	17,5	15,8	16	14,5	24
0,5	17,5	15,8	16	14,5	24
1	22	19,8	19	17	29
2	36,5	32,8	34	30,5	41
4	42	37,8	35	31,5	45
6	58	53	45	41	52

## 9 LUBRICATION

At chain blocks we lubricate the pivots of the pulleys and the shank of the hook. Remove the old lubricant before the application of a new one, clean parts by a dissolvent and put the new lubricant. Use A2 lubricant grease or its equivalent.

### STEEL WIRE ROPES

Poor maintenance or insufficient lubrication of the rope cut down considerably its operating life and can cause a serious accident.

Apply a thin layer of the oil on the rope and swab away. The regular lubrication prevents from wear and tear and corrosion of the rope and lengthens its operating life. Before lubrication clean the rope with a brush or by steam.

## 10 MAINTENANCE

Pulleys except for lubrication do not require any special maintenance.

The manufacturer does not supply spare parts for this product. Should the chain block is damaged or worn out it is necessary to put it out of the operation permanently and replace with a new one.

### 10.1 SAFETY PRINCIPLES

#### **! WARNING**

It is permitted to perform repairs and maintenance in other way than prescribed by the manufacturer. It concerns especially the forbiddance of performing of modifications on the product without an approval of the manufacturer.

**ALWAYS** mark the defective or repaired chain block by the suitable label (for example „OUT OF OPERATION“).

**NEVER** do maintenance when a load is suspended on the chain block.

**NEVER** use a chain block, which is under repair!

## 11 PUTTING OUT OF OPERATION - DISPOSAL

The chain block does not contain any harmful substances; its parts are made of steel and cast iron. After the putting out of operation give it to a firm dealing with disposal of metal waste.

## 12 RELATED DOCUMENTATION

EC declaration of conformity

This Operation Manual was elaborated in accordance with following technical regulations, technical standards and national regulations:

- Ministerial order No.176/2008 of the Coll. of Law as amended (EP and Council directive 2006/42/EC)
- ČSN EN ISO 12100 - 1
- ČSN EN ISO 12100 – 2
- ČSN EN 14121-1
- ČSN EN 13157+A1.

## 13 FINAL REQUIREMENTS OF THE MANUFACTURER TO THE CUSTOMER

**Any changes of the product can be implemented only based on the approval of the manufacturer.**

**When not observing this condition the manufacturer does not guarantee safety of his product. In this case, any manufacturer's guarantees do not apply to the product.**