



# SLOVENSKI STANDARD

## SIST EN 14420-3:2005

01-marec-2005

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### Cevni fitingi z objemkami - 3. del: Objemke, pritive ali pripete

Hose fittings with clamp units - Part 3: Clamp units, bolted or pinned

Schlaucharmaturen mit Klemmfassungen - Teil 3: Klemmfassungen, verschraubt oder verstiftet

Raccords pour flexibles avec demi-coquille - Partie 3: Colliers boulonnés ou goupillés

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Ta slovenski standard je istoveten z: **EN 14420-3:2004**

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#### **ICS:**

23.040.60 Prirobnice, oglavki in spojni elementi Flanges, couplings and joints

**SIST EN 14420-3:2005**

**en**

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EUROPEAN STANDARD  
NORME EUROPÉENNE  
EUROPÄISCHE NORM

**EN 14420-3**

November 2004

ICS 23.040.70

English version

## Hose fittings with clamp units - Part 3: Clamp units, bolted or pinned

Raccords pour flexibles avec demi-coquille - Partie 3:  
Colliers boulonnés ou goupillés

Schlaucharmaturen mit Klemmfassungen - Teil 3:  
Klemmfassungen, verschraubt oder verstiftet

This European Standard was approved by CEN on 30 September 2004.

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This European Standard exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CEN member into its own language and notified to the Central Secretariat has the same status as the official versions.

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EUROPEAN COMMITTEE FOR STANDARDIZATION  
COMITÉ EUROPÉEN DE NORMALISATION  
EUROPÄISCHES KOMITEE FÜR NORMUNG

Management Centre: rue de Stassart, 36 B-1050 Brussels

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## Foreword

This document (EN 14420—3:2004) has been prepared by Technical Committee CEN/TC 218 “Rubber and plastics hoses and hose assemblies”, the secretariat of which is held by BSI.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by May 2005, and conflicting national standards shall be withdrawn at the latest by May 2005.

EN 14420 consists at the time of publication of the following parts:

EN 14420-1, *Hose fittings with clamp units — Part 1: Requirements, survey, designation and testing*

EN 14420-2, *Hose fittings with clamp units — Part 2: Hose side parts of hose tail*

EN 14420-3, *Hose fittings with clamp units — Part 3: Clamp units, bolted or pinned*

EN 14420-4, *Hose fittings with clamp units — Part 4: Flange connections*

EN 14420-5, *Hose fittings with clamp units — Part 5: Threaded connections*

EN 14420-6, *Hose fittings with clamp units — Part 6: TW tank truck couplings*

EN 14420-7, *Hose fittings with clamp units — Part 7: Cam locking couplings*

EN 14420-8, *Hose fittings with clamp units — Part 8: Symmetrical half coupling (Guillemin system)*

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Slovakia, Slovenia, Spain, Sweden, Switzerland and United Kingdom.

**EN 14420-3:2004 (E)****1 Scope**

This document specifies requirements for clamp units for hose couplings according to EN 14420-1 for use with hose tails according to EN 14420-2.

Maximum working pressure 25 bar, maximum working temperature 65 °C.

**2 Normative references**

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

EN 586-2, *Aluminium and aluminium alloys — Forgings — Part 2: Mechanical properties and additional property requirements.*

EN 1706, *Aluminium and aluminium alloys — Castings — Chemical composition and mechanical properties.*

EN 10088-1, *Stainless steels — Part 1: List of stainless steels.*

EN 10213-4, *Technical delivery conditions for steel castings for pressure purposes — Part 4: Austenitic and austenitic-ferritic steel grades.*

EN 12420, *Copper and copper alloys — Forgings.*

EN 14420-1, *Hose fittings with clamp units — Part 1: Requirements, survey, designation and testing.*

EN 14420-2, *Hose fittings with clamp units — Part 2: Hose side parts of hose tail.*

EN 20898-2, *Mechanical properties of fasteners — Part 2: Nuts with specified proof load values — Coarse thread (ISO 898-2:1992).*

EN ISO 898-1, *Mechanical properties of fasteners made of carbon steel and alloy steel — Part 1: Bolts, screws and studs (ISO 898-1:1999).*

EN ISO 3506-1, *Mechanical properties of corrosion-resistant stainless-steel fasteners — Part 1: Bolts, screws and studs (ISO 3506-1:1997).*

EN ISO 3506-2, *Mechanical properties of corrosion-resistant stainless-steel fasteners — Part 2: Nuts (ISO 3506-2:1997).*

EN ISO 4032, *Hexagon nuts, style 1 — Product grades A and B (ISO 4032:1999).*

EN ISO 4042, *Fasteners — Electroplated coatings (ISO 4042:1999).*

EN ISO 4762, *Hexagon socket head cap screws (ISO 4762:2004).*

EN 22768-1, *General tolerances — Part 1: Tolerances for linear and angular dimensions without individual tolerance indications (ISO 2768-1:1989)*

EN 22768-2, *General tolerances — Part 2: Geometrical tolerances for features without individual tolerance indications (ISO 2768-2:1989)*

**3 Fixing range of clamp units**

The pinching range of the clamp units shall be according to Table 1.

NOTE The same clamp units are used for DN and inch designated hoses. Care should be taken at the upper limit of the fixing range.

**Table 1 — Pinching range of clamp units**

Dimensions in millimetres

Nominal size DN	Hose inside diameter		Hose outside diameter range with shank inserted <sup>a</sup> (fixing range)	
		Tolerances	Clamp unit K, bolted	Clamp unit S, pinned
15	13	± 0,5	22 to 24	—
20	19	± 0,5	30 to 33	—
25	25	± 0,5	36 to 39	36 to 38
32	32	± 0,5	43 to 46	43 to 45
40	38	± 0,5	50 to 53	50 to 52
50	50	± 0,7	63 to 67	63 to 67
65	63	± 0,8	78 to 82	78 to 81
80	75	± 0,8	89 to 93	89 to 92
100	100	± 0,8	114 to 119	115 to 118
150	150	+ 1,5 - 0,8	167 to 173	—
200	200	+ 2 - 0,8	222 to 229	—

<sup>a</sup> Hose shank shall be according to EN 14420-2.

## 4 Types of clamp units and designations

### 4.1 General

The different types are:

- clamp unit K, bolted according to 4.2;
- clamp unit S, pinned according to 4.3.

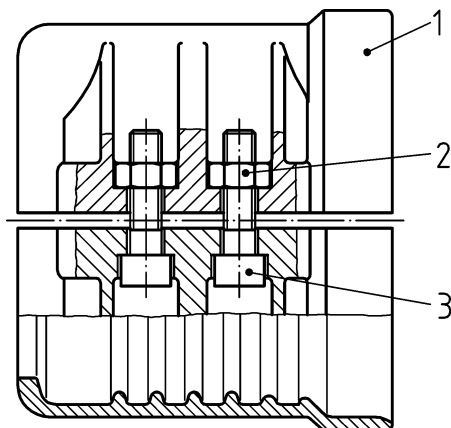
NOTE The design of clamp unit K allows for expert adjustment in certain cases.

The clamp unit shells need not comply with the figures, only the dimensions specified need to be complied with.

### 4.2 Clamp unit K, bolted

The dimensions of clamp units K (Figure 1) shall be according to Figure 3 and Table 4.

## EN 14420-3:2004 (E)

**Key**

- 1 Clamp unit shell
- 2 Hexagon nut
- 3 Hexagon socket head screw

**Figure 1 — Clamp unit K**

Example for an ordering designation of a complete clamp unit K, bolted for nominal size DN 50 made of copper-zinc-alloy CW 614 N:

Clamp unit EN 14420-3 — K 50 — CW 614 N

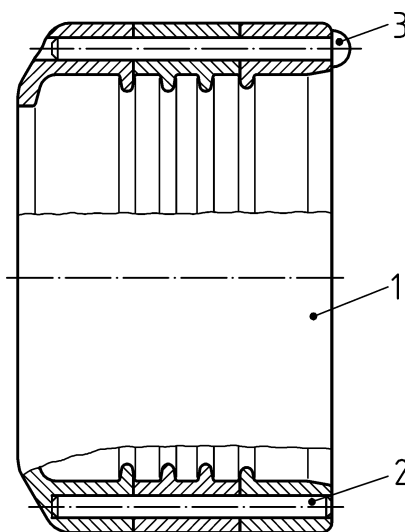
**Table 2 — Parts list of clamp unit K**

Item No.	Designation	Nominal size DN	Number of parts
1	Clamp unit shell	15 to 200	2
2	Hexagon socket head screw	≤ 100	4
		150	6
		200	8
3	Hexagon nut	≤ 100	4
		150	6
		200	8



### 4.3 Clamp unit S, pinned

The dimensions of clamp units S (Figure 2) shall be according to Figure 4 and Table 5.



#### Key

- 1 Clamp unit shell
- 2 Hinge pin
- 3 Locking pin

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Figure 2 — Clamp unit S

Example for an ordering designation of a complete clamp unit S, pinned for nominal size DN 50 from aluminium alloy EN AC-42100:

[SIST EN 14420-3:2005](https://standards.iteh.ai/catalog/standards/sist/9a452544-191c-4038-9411-742420-3-14420-3-2005)

[https://standards.iteh.ai/catalog/standards/sist/9a452544-191c-4038-9411-](https://standards.iteh.ai/catalog/standards/sist/9a452544-191c-4038-9411-742420-3-14420-3-2005)

Clamp unit EN 14420-3 — S 50 — EN AC-42100

**Table 3 — Parts list of clamp unit S**

Item No.	Designation	Nominal size DN	Number of parts
1	Clamp unit shell	25 to 100	2
2	Hinge pin		1
3	Locking pin		1

## 5 Dimensions and weights

### 5.1 Clamp units

#### 5.1.1 Dimensions

##### 5.1.1.1 General

Tolerances for dimensions without specified tolerances:

Dimensions for machined parts: general tolerances shall be according to EN 22768— mK:

— dye forging qualities made from wrought copper alloy shall be according to EN 12420;