

# PULLEYS

EN Pulleys. NO Trinser.  
IT Carrucole. DK Tåljær.  
FR Poulies. NL Katrollen.  
DE Seilrollen. SI Škrpce.  
ES Poleas. SK Kládky.  
PT Polias. RO Scarpet.  
SE Repblock. CZ Kládkám.  
FI Kõyspyörrien.

CE  
0333

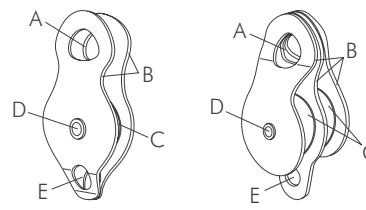
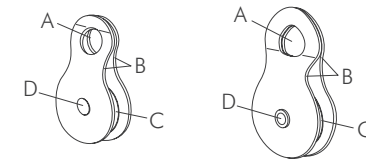
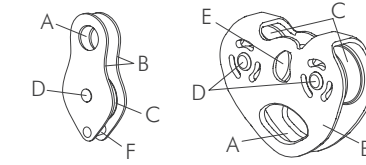
MADE IN EUROPE  
EN 12278:2007

Regulation (EU) 2016/425  
Personal Protective Equipment against falls from a height.

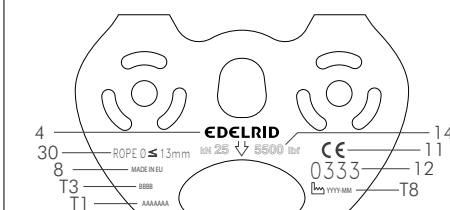
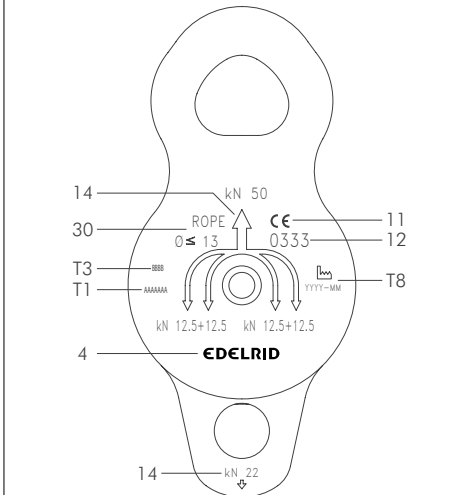
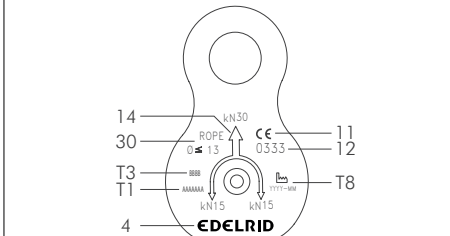
i = G + S

**EDELRID**  
EDELRID GmbH & Co. KG  
Achener Weg 66  
88316 Isny im Allgäu  
Germany

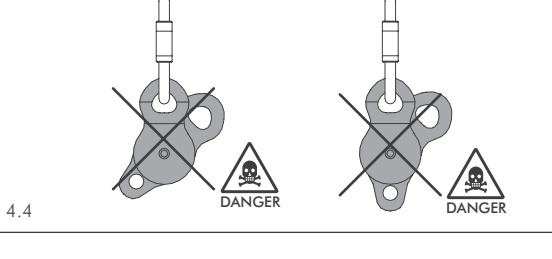
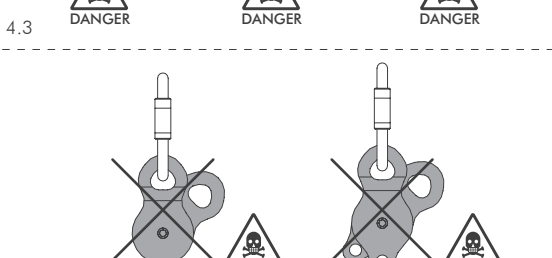
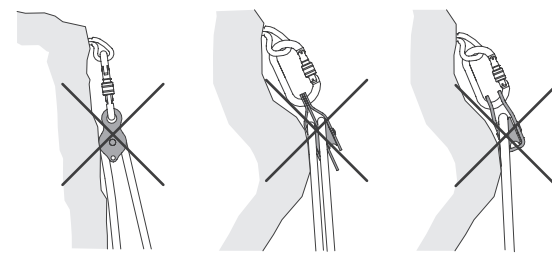
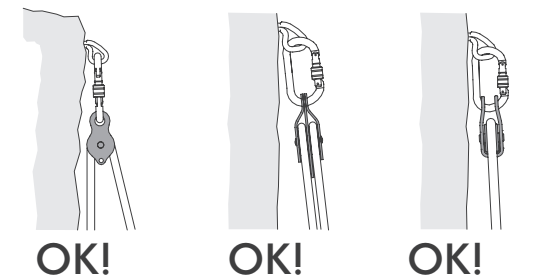
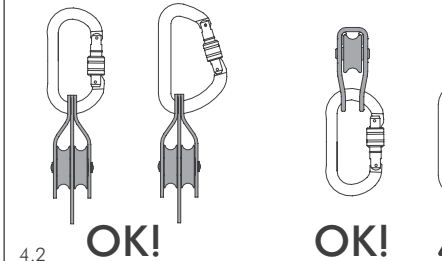
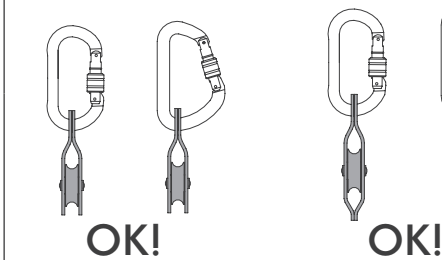
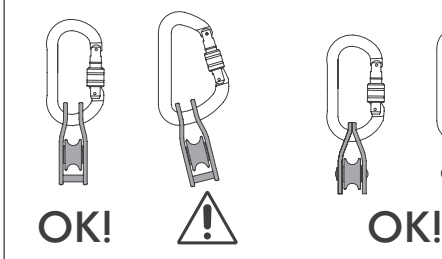
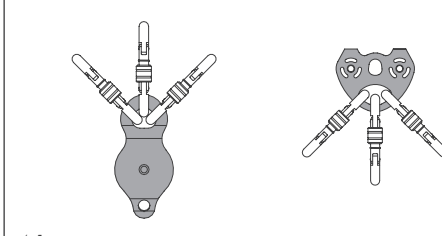
## 2 NOMENCLATURE OF PARTS



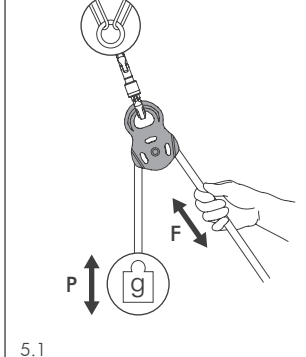
## 3 MARKING



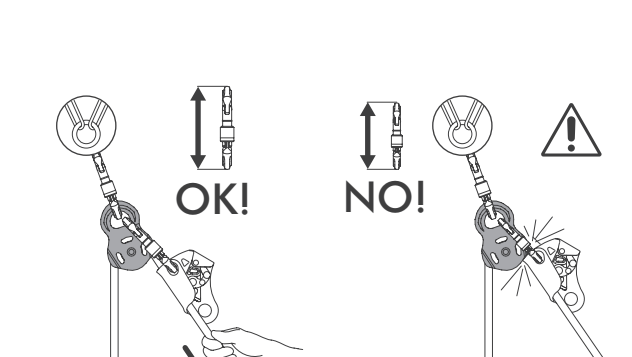
## 4 COMPATIBILITY



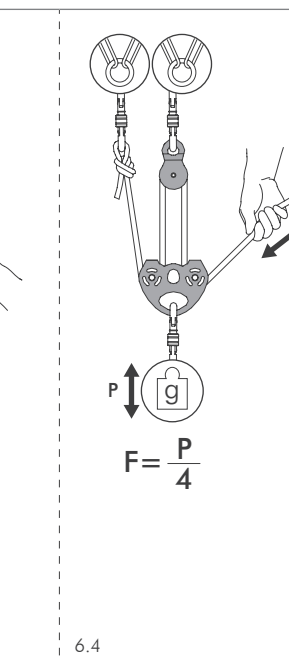
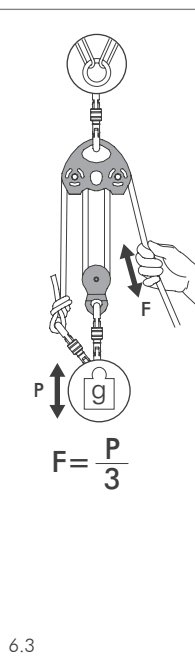
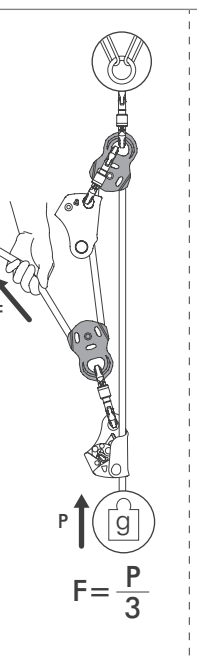
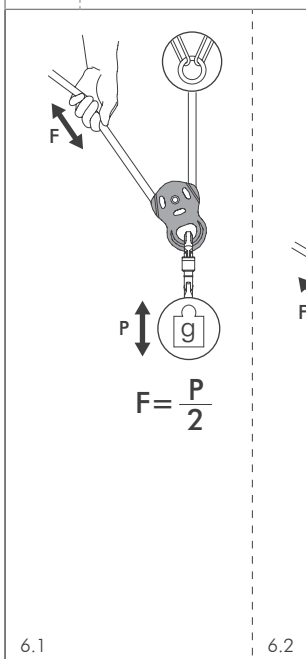
## 5 INSTRUCTIONS FOR USE



|                   |                 |
|-------------------|-----------------|
| Theoretical force | F = P           |
|                   | F = 1,1 ÷ 1,4 P |
|                   | F = 2 P         |



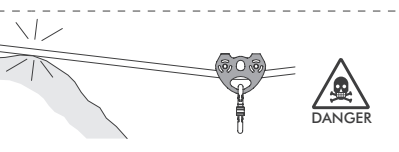
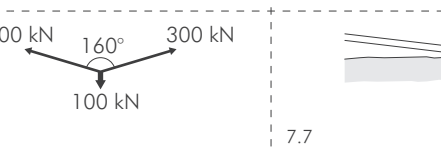
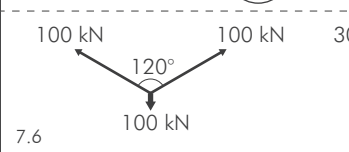
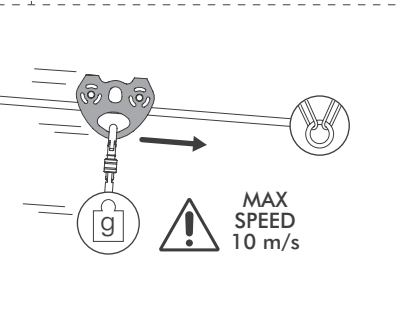
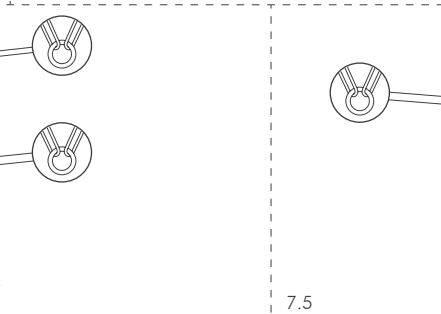
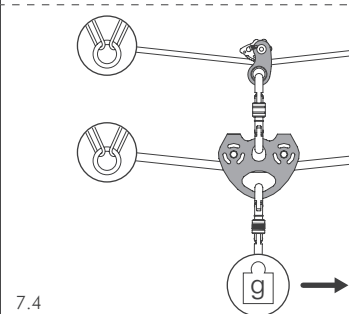
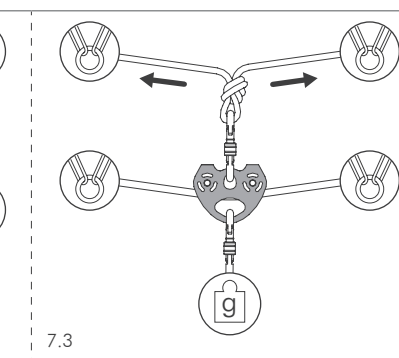
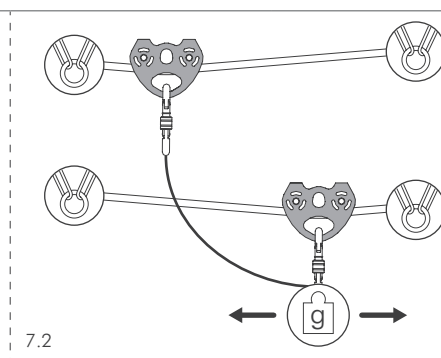
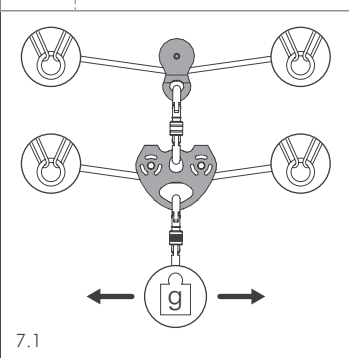
## 6 HAULING SYSTEMS - EXAMPLES OF USE



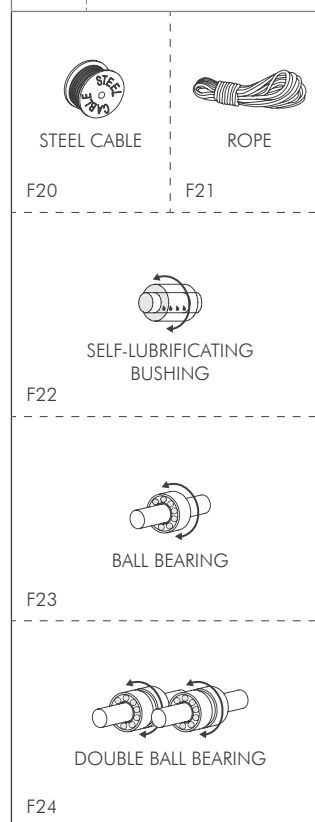
## 1 MODELS / TECHNICAL DATA

| MODEL                    | EASY                      | TURN            | RUN DOWN       | ROLL SINGLE    | ROLL DOUBLE                     | RAIL                     |
|--------------------------|---------------------------|-----------------|----------------|----------------|---------------------------------|--------------------------|
| REF. NO.                 | 88906                     | 71789           | 88907          | 88908          | 88909                           | 71791                    |
|                          | 105 g                     | 94 g            | 200 g          | 210 g          | 345 g                           | 290 g                    |
| BREAKING LOAD            | 30 kN<br>15 15            | 30 kN<br>15 15  | 32 kN<br>16 16 | 32 kN<br>16 16 | 50 kN<br>12.5+12.5<br>12.5+12.5 | 25 kN<br>6.5 6.5 6.5 6.5 |
| WORKING LOAD LIMIT (WLL) | 5 kN<br>2.5 2.5           | 5 kN<br>2.5 2.5 | 8 kN<br>4 4    | 8 kN<br>4 4    | 12 kN<br>3+3 3+3                | 10 kN<br>2.5 2.5 2.5 2.5 |
| EFFICIENCY               | 80%                       |                 |                | 96%            |                                 | 90%                      |
| ROTATING SYSTEM          | SELF-LUBRICATING BRUSHING |                 | BALL BEARING   |                | DOUBLE BALL BEARING             |                          |
|                          | NO!                       |                 |                |                | Ø ≤ 12 mm                       |                          |
|                          |                           |                 |                |                | Ø ≤ 13 mm                       |                          |
| TYROLEAN                 | YES                       | NO              | YES            |                |                                 |                          |

## 7 TYROLEAN - EXAMPLES OF USE



## F LEGEND



## ENGLISH

The instruction manual for this device consists of general and specific instructions, both must be carefully read and understood before use. **Attention!** This leaflet shows the specific instruction only.

**SPECIFIC INSTRUCTIONS EN 12278:2007.**

This note contains the necessary information for a correct use of the following product/s: pulleys.

**1) FIELD OF APPLICATION.** EN 12278:2007: Mountaineering equipment - Pulleys. This product is a personal protective device (PPE) against falls from height; it is compliant with the Regulation (EU) 2016/425.

**2) NOTIFIED BODIES.** Refer to the legend in the general instructions (paragraph 9 / table D): M1; M2; N1.

**3) NOMENCLATURE.** (Fig. 2). A) Connecting hole. B) Sheave (mobile or fixed). C) Pulleys with rotation system (Fig. 1). D) Rotation Pin. E) Auxiliary connecting hole (only where it's present). F) Side plates anti-rotation pin (only when present).

**3.1 - Main materials.** Refer to the legend in the general instructions (paragraph 2.4): 3 (sheave, pulleys). **Only for model Duo2to:** 2 (pulleys, pin); 3 (sheave).

**4) MARKING.** Numbers/letters without caption: refer to the legend in the general instructions (paragraph 5). Numbers/letters with asterisk (\*): indication shown depending on the model.

**4.1 - General (Fig. 3).** Indications: 1; 4; 7; 8; 11; 12; 14; 30) Usable rope/ lanyard diameters; 31) Usable cable diameters\*; 32) Pictogram indicating that the device includes pulleys mounted on ball bearings\*.

**4.2 - Traceability (Fig. 3).** Indications: T1; T3; T8; T9\*.

**5) CHECKS.** Further to the checks listed below, comply with what indicated in the general instructions (paragraph 3). **Before each use, verify that:** connectors in use work properly and symmetrically. **During each use, make sure that pulley and rope do not lean against, or rub,**

sharp edges and abrasive materials.

**6) COMPATIBILITY.** The product can be used only with CE marked devices, mountaineering and working equipment such as ropes (EN 892 / EN 1891), lanyards (EN 564), connectors (EN 12275) etc.

**6.1 - Ropes and steel cables.** The compatibility of the different models with ropes and/or steel cables is shown in the table (Fig. 1). **Attention!** Never use the pulleys with sheaves in light alloy on metal cables.

**6.2 - Connectors.** To connect the device to the anchor point, use only connectors equipped with a locking gate. **Attention!** Always insert the connector in the connecting holes of all the sheaves (Fig. 4.4).

**7) INSTRUCTIONS FOR USE.** The pulleys are devices used to reduce the friction when lifting or moving a load.

**7.1 - Efficiency.** In the basic configuration the theoretical force (F) necessary to lift a weight (P) is equal to the weight itself (Fig. 5.1). In reality there are frictions that reduce the efficiency of the pulley and increase the force necessary to actually lift the weight (F = 1,1 ÷ 1,4 P). If a connector was used instead of the pulley, the F value would be twice as much as P. **Attention!** Where otherwise specified, the indicated F values are theoretical.

**7.2 - Warnings.** The stress on the anchor point and on the other elements of the system can increase considerably due to the dynamic movements of the load during the manoeuvre: verify the overall resistance of the system.

**8) USE FOR TENSIONED LINE/TYROLEAN.** 1) The anchor points of the working line of work must be separated from those of the safety line (Fig. 7.1-7.2-7.3). 2) Prepare an auto blocking device (ex. Rollinlock) on the safety rope for the autonomous progression (Fig. 7.4). 3) Pay attention to the stresses generated on the anchor points based on the angle that is created (Fig. 7.6). 4) Pay attention to the inclination of the cable/rope and the consequent speed of descent (Fig. 7.5).

**9) SYMBOLS.** Refer to the legend in the general instructions (paragraph 15): F1; F20) Metal cable; F21) Rope/lanyard; F22) Self-lubricating bushing; F23) Ball Bearing; F24) Double Ball Bearing.

## ITALIANO

Le istruzioni d'uso di questo dispositivo sono costituite da un'istruzione generale e da una specifica ed entrambe devono essere lette attentamente prima dell'utilizzo. **Attenzione!** Questo foglio costituisce solo l'istruzione specifica.

**ISTRUZIONI SPECIFICHE EN 12278:2007.** Questa nota contiene le informazioni necessarie per un utilizzo corretto del seguente prodotto/i: carrucole.

**1) CAMPO DI APPLICAZIONE.** EN 12278:2007: Attrezzatura per alpinismo - Pulegge. Questo prodotto è un dispositivo di protezione individuale (D.P.I.) contro le cadute dall'alto; esso è conforme al regolamento (UE) 2016/425.

**2) ORGANISMI NOTIFICATI.** Consultare la legenda nelle istruzioni generali (paragrafo 9 / tabella D): M1; M2; N1.

**3) NOMENCLATURA (Fig. 2).** A) Foro di collegamento. B) Guancia (mobile o fissa). C) Puleggia con sistema di rotazione (Fig. 1). D) Perno di rotazione. E) Foro di collegamento ausiliario (solo dove presente). F) Perno anti-rotazione guancia (solo dove presente).

**3.1 - Materiali principali.** Consultare la legenda nelle istruzioni generali (paragrafo 2.4): 3 (guance, pulegge). **Solo per modello Duo2to:** 2 (pulegge, perno); 3 (guance).

**4) MARCATURA.** Numeri/lettere senza didascalia: consultare la legenda nelle istruzioni generali (paragrafo 5). Numeri/lettere con asterisco (\*): indicazione presente a seconda del modello.

**4.1 - Generale (Fig. 3).** Indicazioni: 1; 4; 7; 8; 11; 12; 14; 30) Diametri di corda/cordino utilizzabili; 31) Diametri di cavo utilizzabili\*; 32) Pictogramma indicante che il dispositivo include pulegge su cuscinetti a sfera\*.

**4.2 - Tracciabilità (Fig. 3).** Indicazioni: T1; T3; T8; T9\*.

**5) CONTROLLI.** Oltre ai controlli indicati di seguito rispettare quanto indicato nelle istruzioni generali (paragrafo 3).

**7.1 - Rendimento.** Nella configurazione di base la forza (F) teorica necessaria per sollevare un peso (P) è uguale al peso stesso (Fig. 5.1). In realtà esistono degli attriti che riducono il rendimento della carrucola e aumentano la forza effettiva necessaria per il sollevamento (F = 1,1 ÷ 1,4 P). Aggiuntivo se si utilizzasse un connettore al posto della carrucola il valore di F diverrebbe il doppio di P. **Attenzione!** Laddove diversamente specificato i valori di F indicati sono teorici.

**7.2 - Avvertenze.** Le sollecitazioni sul punto di ancoraggio e sugli altri elementi del sistema possono aumentare notevolmente a causa dei movimenti dinamici del carico durante la manovra: verificare la resistenza complessiva del sistema.

**8) UTILIZZO PER TELEFERICA/TIROLESE.** 1) I punti di ancoraggio della linea di lavoro devono essere separati da quelli della linea di sicurezza (Fig. 7.1-7.2-7.3). 2) Preparare un attrezzo autobloccante (es. Rollinlock) sulla corda di sicurezza per la progressione autonoma (Fig. 7.4). 3) Prestare attenzione alle sollecitazioni generate sugli ancoraggi in base all'angolo che si va a creare (Fig. 7.6). 4) Prestare attenzione all'inclinazione del cavo/corda e la conseguente velocità di discesa (Fig. 7.5).

**9) SIMBOLI.** Consultare la legenda nelle istruzioni generali (paragrafo 15): F1; F3; F20) Cavo metallico; F21) Corda/cordino; F22) Bussola autolubrificante; F23) Cuscinetto; F24) Cuscinetto doppio.

## FRANÇAIS

Les instructions d'utilisation de ce dispositif comprennent une partie générale et une partie spécifique, lesquelles doivent toutes les deux être lues attentivement avant utilisation. **Attention !** La présente fiche ne contient que les instructions spécifiques.

**ISTRUZIONI SPECIFICHE EN 12278:2007.** Cette note contient les informations nécessaires à l'utilisation correcte du produit/s suivant/s : poulies.

**1) CHAMP D'APPLICATION.** EN 12278:2007: Equipement pour alpinisme - Poulies. Ce produit est un dispositif de protection individuelle (E.P.I.) contre les chutes d' hauteur ; il est conforme au Règlement (UE) 2016/425.

**2) ORGANISMES NOTIFIÉS.** Consulter la légende dans les instructions générales (paragraphe 9/tableau D) : M1 ; M2 ; N1.

**3) NOMENCLATURE.** (Fig. 2) : A) Trou de raccordement. B) Flâque (mobile ou fixe). C) Poulie avec système de rotation (Tab.1). D) Pivot de rotation. E) Trou de connexion auxiliaire (seulement où il est présent). F) Pivot anti-rotation flasques (seulement si présent).

**3.1 - Matériaux principaux.** Consulter la légende dans les instructions générales (paragraphe 2.4) : 3 (flasque, poulie). **Seulement pour le modèle Duo2to:** 2 (poulie, pivot) ; 3 (flasque).

**4) MARQUAGE.** Chiffres/lettres sans légende : consulter la légende dans les instructions générales (paragraphe 5). Chiffres/lettres avec astérisque (\*) : indication présente selon le modèle.

**4.1 - Général (Fig. 3).** Indications : 1 ; 4 ; 7 ; 8 ; 11 ; 12 ; 14 ; 30) Diamètres de corde/cordelette utilisables ; 31) Diamètres de câble utilisables\* ; 32) Pictogramme qui indique que le dispositif inclut des poulies sur roulement à billes\*.

**4.2 - Tracabilité (Fig. 3).** Indications : T1 ; T3 ; T8 ; T9\*.

**5) CONTRÔLES.** En plus des contrôles indiqués en suite, il faut respecter ce qui est indiqué dans les instructions générales (paragraphe 3).

