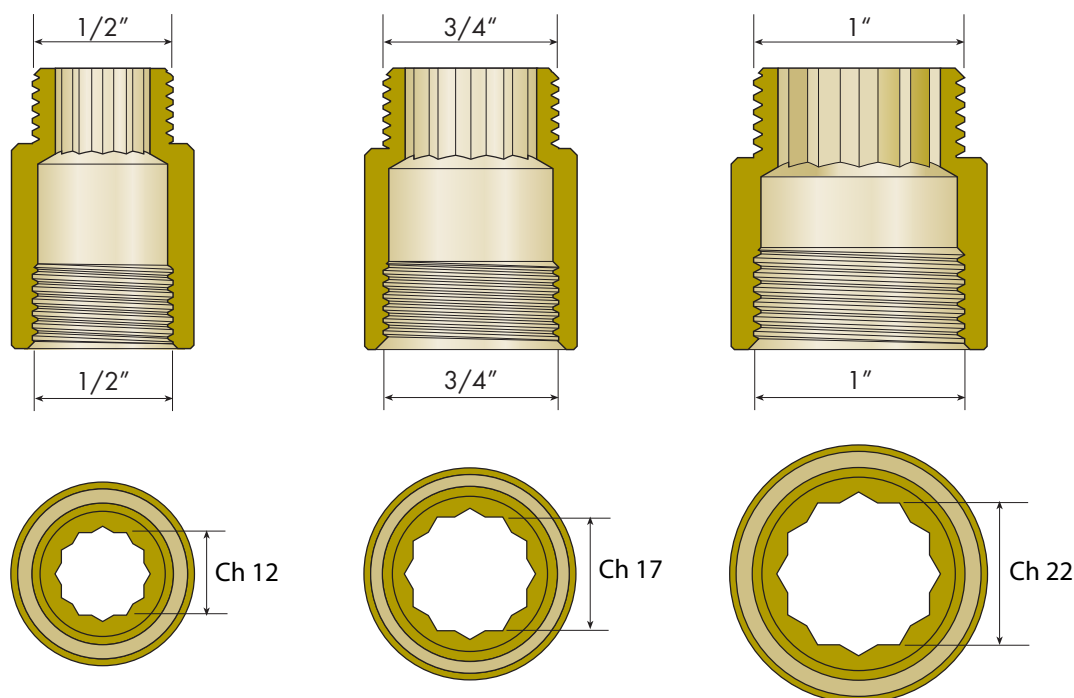




## **PROLUNGHE** DIN 3523

Raccordi filettati serie "Zero" - Pesante



DIMENSIONI PROLUNGHE

## TIPOLOGIA PRODOTTO

Raccordi filettati pesanti

## FUNZIONE

Raccordi per impianti di adduzione acqua sanitaria  
Raccordi per impianti di riscaldamento

## SPECIFICHE TECNICHE

Le prolunghe pesanti Comisa serie zero sono compatibili con:

- Terminali filettati maschio cilindrici UNI EN ISO 228-1:2003
- Terminali filettati maschio conici UNI EN 10226-2:2006
- Terminali filettati femmina UNI EN ISO 228-1:2003

## MATERIALI

Ottone UNI EN 12164/12168 CW 617 N (DIN 50930-6)

- Adatto al contatto con liquidi alimentari destinati al consumo umano (conforme DIN 3523)
- Durezza HB 2,5/62,5 ≤ 115 (conforme DIN 3523)

## TRATTAMENTO TERMICO

Normalizzazione

## FINITURA SUPERFICIALE

- Nessuna finitura, colore giallo naturale
- Cromatura (raccordo non adatto al contatto con liquidi alimentari)

## MARCATURA

I raccordi presentano la scritta: COMISA - "misura" -  
Made in Italy DIN 3523

## GARANZIA

10 anni a norma di legge.

Tale garanzia decade qualora

- l'installazione non avvenga secondo le istruzioni di montaggio riportate nelle pubblicazioni di Comisa S.p.A.
- Il circuito venga impiegato per condurre liquidi diversi da quelli riportati nelle pubblicazioni di Comisa S.p.A.
- Nei circuiti vengano immessi liquidi a valori di pressione e temperatura diversi dai rispettivi limiti riportati nelle pubblicazioni di Comisa S.p.A.

## CONFORMITÀ

Il prodotto è conforme alla normativa

DIN 3523:2001-04





### PROLUNGHE **NON** NORMALIZZATE

- Colore giallo chiaro
- Durezza HB 2,5/62,5 > 115 (non conforme DIN 3523)
- Sottoposta a schiacciamento radiale per una deformazione = 7% del diametro **si assiste alla formazione di fratture**
- Sottoposta a schiacciamento radiale = 400 Kgf **si producono crepe**



### PROLUNGHE **NORMALIZZATE**

- Colore giallo intenso
- Durezza HB 2,5/62,5 ≤ 115 (conforme DIN 3523)
- Sottoposta a schiacciamento radiale per una deformazione > 7% del diametro **non si assiste alla formazione di fratture**
- Sottoposta a schiacciamento radiale > 400 Kgf **non si producono crepe (deformazione plastica)**

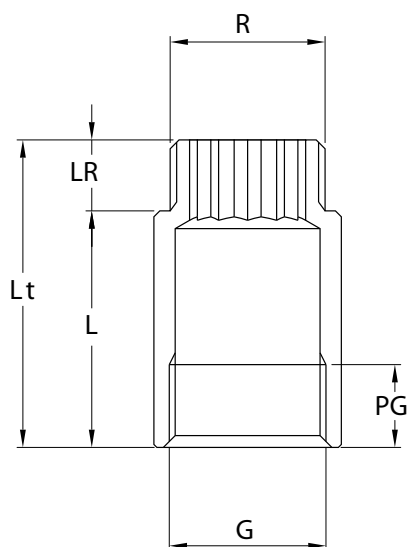
#### EFFETTI DEI TRATTAMENTI TERMICI SULLE LEGHE DI OTTONE



- ▶ Le lavorazioni meccaniche necessarie per ottenere il manufatto (raccordo) ne causano l'incrudimento ed il conseguente aumento della fragilità: vi si può ovviare mediante appropriato trattamento termico. Attraverso il riscaldamento dei raccordi ad una certa temperatura per un tempo prefissato si ottiene un ammorbidimento del manufatto. Durante la normalizzazione di una lega, i cristalli deformati e sotto sforzo sono trasformati in cristalli privi di tensioni attraverso riassetto, ricristallizzazione e crescita dei grani. Nel raccordo normalizzato aumenta la capacità di assorbire deformazioni senza il rischio di rotture; l'aspetto estetico presenta una significativa variazione della colorazione.



## DIMENSIONI

PROLUNGA  
MASCHIO / FEMMINA  
PESANTE

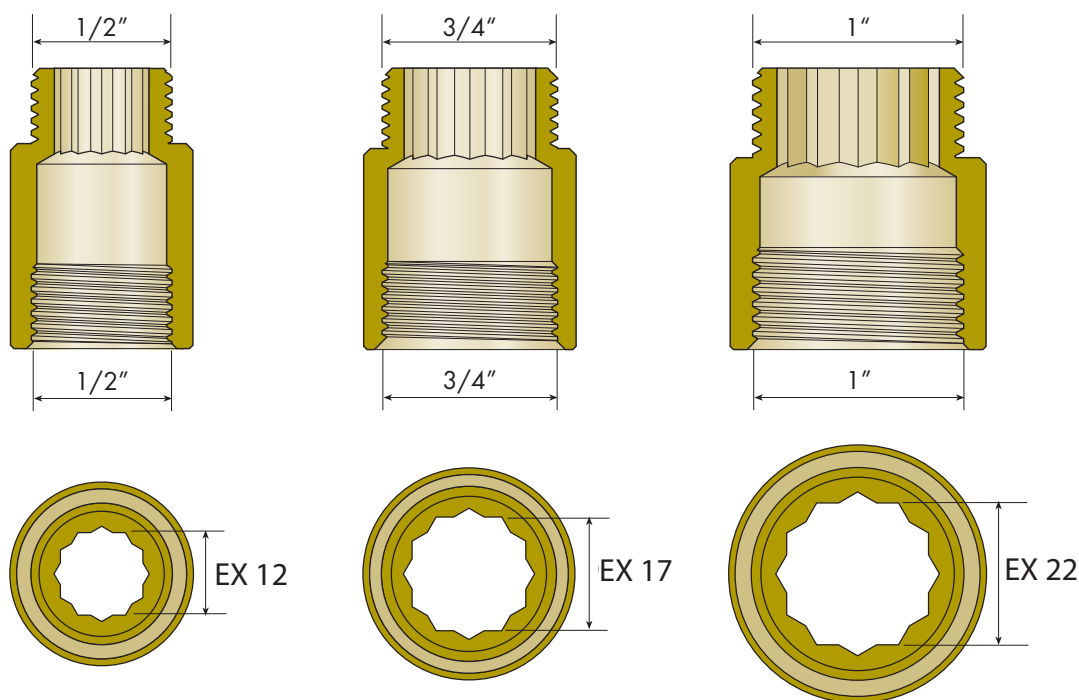


Misure	G	L	LR	Lt	PG	R	 Codice	 Codice
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1"	1"	60	14	74	14	1"	77.15.321	77.17.321
1"	1"	80	14	94	14	1"	77.15.323	77.17.323
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**EXTENSIONS** DIN 3523  
Threaded fittings Series "Zero" - Heavy type



EXTENSION DIMENSIONS

#### TYPE OF PRODUCT

Heavy threaded fittings

#### PURPOSE

Fittings for water supply systems  
Fittings for heating systems

#### TECHNICAL SPECIFICATIONS

The Comisa heavy extensions Series "Zero" are compatible with:

- UNI EN ISO 228-1:2003 cylindrical male threaded ends
- UNI EN 10226-2:2006 conical male threaded ends
- UNI EN ISO 228-1:2003 female threaded ends

#### MATERIALS

- UNI EN 12164/12168 CW 617 N (DIN 50930-6) Brass
- Suitable for contact with food liquids for human consumption (complies with DIN 3523 standards)
  - HB 2.5/62.5 ≤ 115 Hardness (complies with DIN 3523 standards)

#### HEAT TREATMENT

Normalising

#### SURFACE FINISHING

- No finishing, natural yellow colour
- Chromium-plating (fitting not suitable for contact with food liquids)

#### MARKING

The fittings bear the writing: COMISA - "size" -  
Made in Italy DIN 3523

#### WARRANTY

10 years in accordance with the law.

Such warranty expires in case

- Installation of the system be non-compliant with the mounting instructions published by Comisa;
- The system be used for the conduction of liquids other than those listed in Comisa's publications;
- Liquids be introduced into the system with temperature and pressure values that do not comply with Comisa's published instructions.

#### COMPLIANCE

The product complies with the DIN 3523:2001-04 standard.





### NON-NORMALISED EXTENSIONS

- Light yellow colour
- HB 2.5/62.5 > 115 Hardness (does not comply with DIN 3523 standards)
- Occurrence of fractures if subjected to radial compression by a deformation = 7% of the diameter
- Cracks occur if subjected to radial compression = 400 Kgf



### NORMALISED EXTENSIONS

- Dark yellow colour
- HB 2.5/62.5 ≤ 115 Hardness (complies with DIN 3523)
- No fractures if subjected to radial compression by a deformation > 7% of the diameter
- No cracks occur if subjected to radial compression > 400 Kgf (plastic deformation)

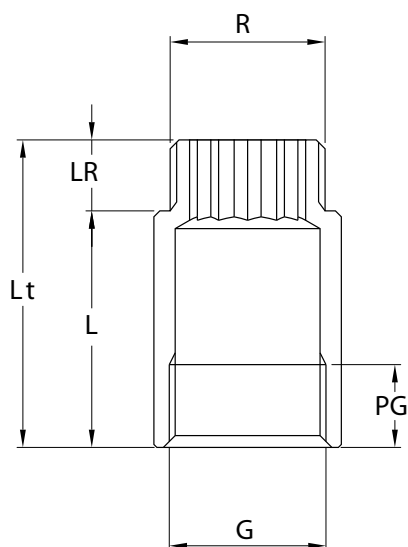
### EFFECTS OF THERMAL TREATMENT ON THE BRASS ALLOYS



- ▶ Mechanical operations required to obtain the product (fitting) causes hardening thereof and the ensuing increase of fragility. This problem can be overcome through suitable heat treatment.  
Heating the fittings at a given temperature over a preset period of time allows softening the product.  
When normalising an alloy, crystals deformed and subjected to stress are transformed into stress-free crystals through resetting, re-crystallisation and grain growth.  
Normalised fittings have a higher capacity of absorbing deformations without being exposed to the risk of breakage, while the aesthetic aspect varies considerably in terms of colour.



## DIMENSIONS

EXTENSION  
MALE / FEMALE  
HEAVY



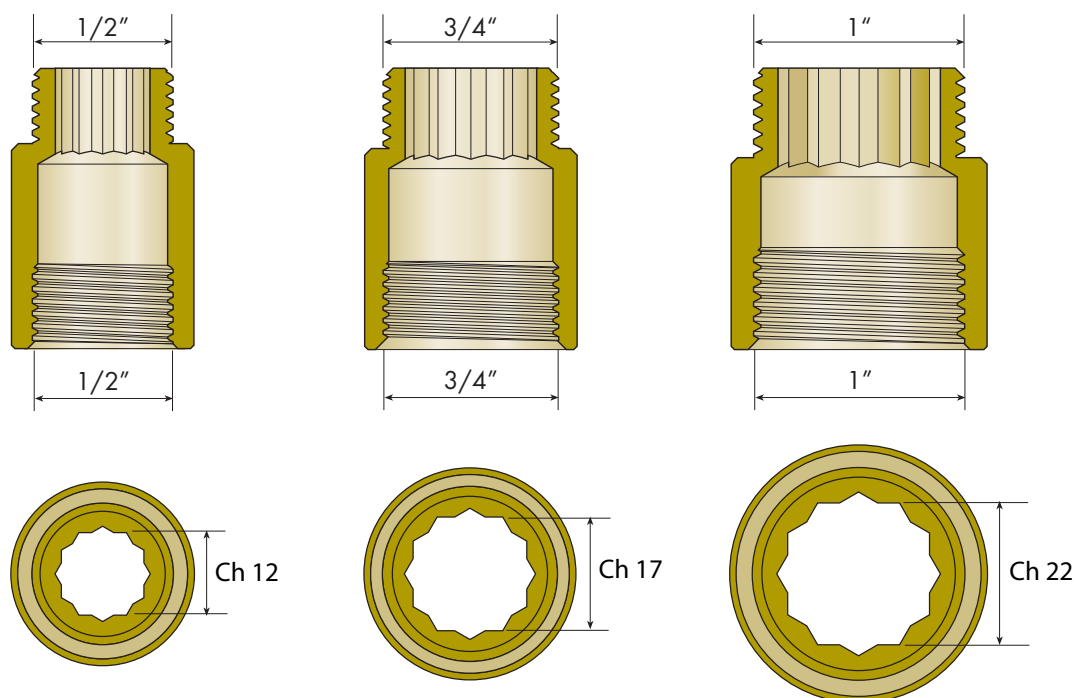
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## HAHNVERLÄNGERUNGEN

**DIN 3523** Gewindefittings Serie "Zero" - Schwere Ausführung



ABMESSUNGEN

## PRODUKTART

Gewindefittings - Schwere Ausführung

## FUNKTION

Fittings für Trinkwasserinstallationen  
Fittings für Heizungsanlagen

## TECHNISCHE EIGENSCHAFTEN

Die Hahnverlängerungen Schwere Ausführung Comisa der Serie "Zero" passen auf:

- Endstücke mit AG zylindrisch UNI EN ISO 228-1:2003
- Endstücke mit AG konisch UNI EN ISO 10226-2:2006
- Endstücke mit IG UNI EN ISO 228-1:2003

## MATERIAL

Messing UNI EN 12164/12168 CW 617 N (DIN 50930-6)  
• Für Trinkwasserinstallationen geeignet (entspricht DIN 3523)  
• Härte HB 2,5/62,5 ≤ 115 (entspricht DIN 3523)

## WÄRMEBEHANDLUNG

Normalglühen

## OBERFLÄCHENBEHANDLUNG

- Keine Oberflächenbehandlung, Farbe: Messinggelb
- Verchromung (nicht geeignet für Trinkwasserinstallationen)

## KENNZEICHNUNG

Auf den Fittings ist folgende Beschriftung angebracht:  
COMISA "Größe" - Made in Italy DIN 3523

## GARANTIE

10 Jahre, den gesetzlichen Bestimmungen entsprechend.  
Diese Garantie gilt nicht, falls

- Die Installation wird nicht fachgerecht gemäß den Einbauanleitungen COMISAs durchgeführt;
- Das System wird für den Transport von Medien eingesetzt, die außerhalb der von COMISA genannten technischen Vorgaben liegen;
- Fehlerhafte bzw. nicht zugelassene Drücke und Temperaturen, außerhalb der in den Anweisungen vorgegebenen Richtlinien liegend, eine Gewährleistung seitens COMISA ausschließen.

## KONFORMITÄTSERKLÄRUNG

Das Produkt entspricht der Norm  
DIN 3523:2001-04.





## HAHNVERLÄNGERUNGEN OHNE NORMALGLÜHEN

- Farbe: helles Gelb
- Härte HB 2,5/62,5 > 115 (entspricht nicht DIN 3523)
- Bei einem Radialquetschen mit einer Verformung = 7% des Durchmessers entstehen Brüche
- Bei einem Radialquetschen = 400 Kgf entstehen Risse



## NORMALGEGLÜHTE HAHNVERLÄNGERUNGEN

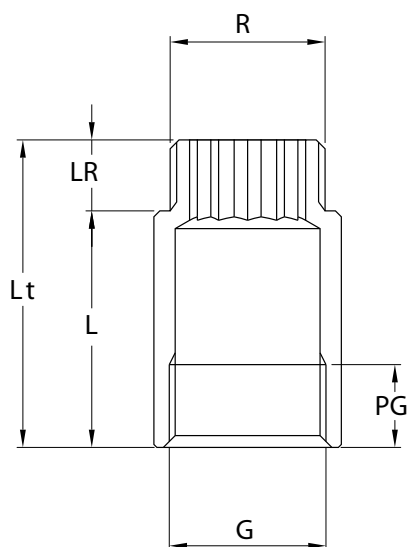
- Farbe: leuchtendes Gelb
- Härte HB 2,5/62,5 ≤ 115 (entspricht DIN 3523)
- Bei einem Radialquetschen mit einer Verformung > 7% des Durchmessers entstehen keine Brüche
- Bei einem Radialquetschen > 400 Kgf entstehen keine Risse (zähe Verformung)



### AUSWIRKUNGEN DER WÄRMEBEHANDLUNG AUF DIE MESSINGLEGIERUNGEN

- ▶ Die für die Entstehung des Werkstücks (Fitting) notwendige mechanische Bearbeitung führt zur Verfestigung und somit zu einer erhöhten Brüchigkeit, der man mit einer entsprechenden Wärmebehandlung begegnen kann.  
Wird das Fitting für eine vorher festgelegte Zeit bis zu einer bestimmten Temperatur erhitzt, führt dies zu einer Erweichung des Werkstücks.  
Beim Normalglühen einer Legierung werden die verformten und unter Spannung stehenden Kristalle mittels Versetzung, Rekristallisation und Kornwachstum in Kristalle ohne Spannung umgewandelt.  
Durch das Normalglühen erhöht sich die bruchfreie Verformbarkeit des Werkstücks, wobei durch die Behandlung eine signifikante farbliche Veränderung auftritt.



HAHNVERLÄNGERUNG  
AG/IG SCHWERE  
AUSFÜHRUNG



Abmessungen	G	L	LR	Lt	PG	R		
							Art. Nr.	Art. Nr.
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