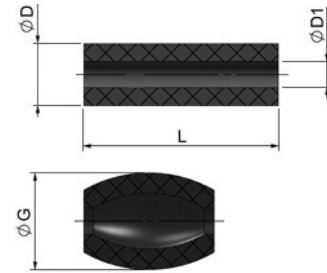


**MOLLA IN POLIURETANO FORATA**  
**DRILLED POLYURETHANE SPRING**  
**POLYURETHAN-FEDER, GELOCHT**

# EMP-1



|                         |     |     |     |
|-------------------------|-----|-----|-----|
| Sigla Courbhane:        |     |     |     |
| Courbhane Mark:         | 80  | 90  | 95  |
| Courbhane Code:         |     |     |     |
| Durezza Shore:          |     |     |     |
| Shore Hardness:         | 80  | 90  | 95  |
| Shore Härte:            |     |     |     |
| Schiacciamento Massimo: |     |     |     |
| Maximum Crushing:       | 33% | 25% | 20% |
| Maximale Quetschung:    |     |     |     |

- D=** Diametro esterno - outside diameter - Außendurchmesser
- D1=** Diametro del foro - hole diameter - Lochdurchmesser
- L=** Altezza libera - free height - freie Höhe
- G=** Diametro massimo di gonfiamento  
Maximum swelling diameter  
Maximaler Schwelldurchmesser

| D   | D1   | L   | G. MAX  |         |         |
|-----|------|-----|---------|---------|---------|
|     |      |     | COD. 80 | COD. 90 | COD. 95 |
| 16  | 6,5  | 500 | 21      | 20      | 19      |
| 20  | 8,5  | 500 | 27      | 26      | 25      |
| 25  | 10,5 | 500 | 34      | 32      | 30      |
| 32  | 13,5 | 500 | 44      | 40      | 39      |
| 40  | 13,5 | 500 | 55      | 50      | 49      |
| 50  | 17   | 500 | 67      | 63      | 60      |
| 63  | 17   | 500 | 82      | 80      | 76      |
| 80  | 21   | 500 | 106     | 104     | 100     |
| 100 | 21   | 500 | 128     | 125     | 122     |
| 125 | 27   | 500 | 156     | 150     | 148     |

**Esempio di ordinativo:** D x Cod.    **Order example:** D x Cod.    **Bestellbeispiel:** D x Cod.

## MOLLA IN ELASTOMERO EFFBE FORATA

DRILLED EFFBE ELASTOMER SPRING

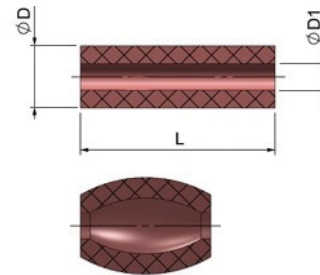
ELASTOMER-FEDER EFFBE, GELOCHT

## EMP-2

**Specifiche:** Barre forate - EFFBE - Urelast 90 SHORE A.  
Impiegate per realizzare molle in lunghezze speciali, rondelle ammortizzanti, particolari a disegno e prototipi

**Specification:** Round tube stock – EFFBE – Urelast 90 SHORE A.  
Used for making special length springs, conical washers, design parts and prototypes

**Spezifikationen:** Gelochte Stäbe - EFFBE - Urelast 90 SHORE A.  
Für Federn mit Speziallängen, Dämpferscheiben, Teile nach Zeichnung und Prototypen



| D  | D1   | L   |
|----|------|-----|
| 16 | 6,5  | 300 |
| 20 | 8,5  | 300 |
| 25 | 10,5 | 300 |
| 32 | 13,5 | 300 |
| 40 | 13,5 | 300 |

| D   | D1 | L   |
|-----|----|-----|
| 50  | 17 | 400 |
| 63  | 17 | 400 |
| 80  | 21 | 400 |
| 100 | 21 | 300 |
| 125 | 27 | 300 |

**Esempio di ordinativo:** D    **Order example:** D    **Bestellbeispiel:** D

## MOLLA IN ELASTOMERO EFFBE PIENA

SOLID EFFBE ELASTOMER SPRING

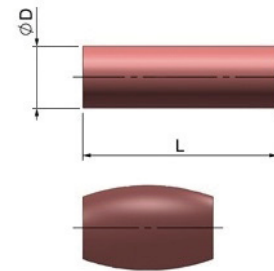
ELASTOMER-FEDER EFFBE, NICHT GELOCHT

## EMP-3

**Specifiche:** Barre piene - EFFBE - Urelast 90 SHORE A.  
Impiegate per realizzare molle piene (resistenza a carichi maggiori rispetto alle molle forate), particolari a disegno e prototipi

**Specification:** Solid bar stock – EFFBE – Urelast 90 SHORE A.  
Used to make solid springs (for greater load resistance compared to tube springs), design parts and prototypes

**Spezifikationen:** Volle Stäbe - EFFBE - Urelast 90 SHORE A.  
Für volle Federn (höhere Belastungswiderstände als gelochte Federn), Teile nach Zeichnung und Prototypen



| D  | L   |
|----|-----|
| 16 | 300 |
| 20 | 300 |
| 25 | 300 |
| 32 | 300 |
| 40 | 300 |

| D   | L   |
|-----|-----|
| 50  | 400 |
| 63  | 400 |
| 80  | 400 |
| 100 | 300 |
| 125 | 300 |

**Esempio di ordinativo:** D    **Order example:** D    **Bestellbeispiel:** D

## MOLLA AL CROMO-VANADIO PER STAMPI - SPECIFICHE TECNICHE

### CHROME-VANADIUM SPRING FOR MOLDS - TECHNICAL SPECIFICATION

### FEDER FÜR CHROM-VANADIUM-FORMEN - TECHNISCHE SPEZIFIKATIONEN

**Costruzione:** La sezione della molla è realizzata in modo tale che, dopo l'avvolgimento, si presenti di forma rettangolare (e non trapezoidale) con i bordi arrotondati. In tal modo è possibile ottenere le massime prestazioni, unitamente ad un basso livello di sollecitazione del materiale. Inoltre la particolare conformazione dei bordi aumenta ulteriormente la capacità di resistenza a fatica della molla

**Construction:** The cross-section of the spring is realized to be rectangular after coiling (not trapezoidal) with rounded edges. This provides maximum performance together with a low level of material stress. Furthermore, the special shape of the edges increases the fatigue resistance of the spring

**Konstruktion:** Der Querschnitt der Feder ist nach der Wicklung rechteckig (nicht trapezförmig) mit abgerundeten Kanten. Dadurch können maximale Leistungen in Verbindung mit einer geringen Materialbelastung erzielt werden. Darüber hinaus erhöht die besondere Form der Kanten zusätzlich die Ermüdungsfestigkeit der Feder

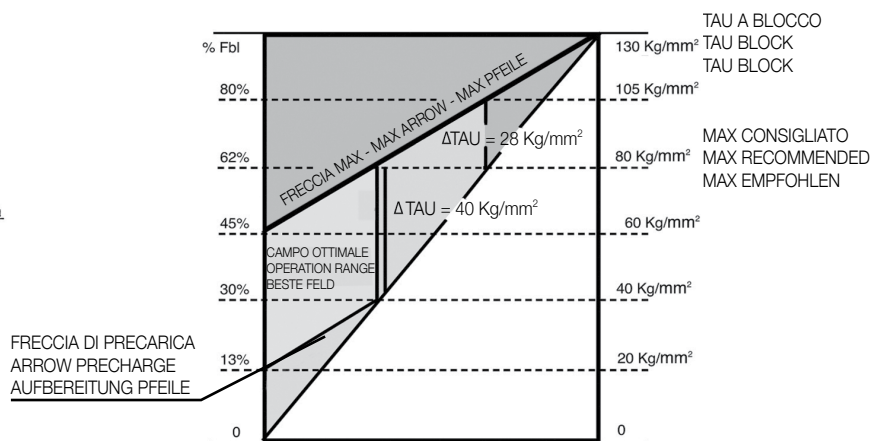
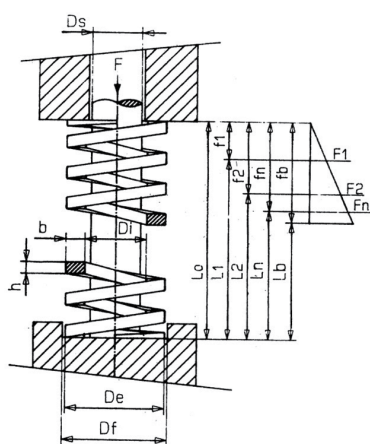
### Schema e simboli della molla - Drawing and symbols of the spring - Schema und Symbole der Feder

|                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>De (mm)</b>         | Diametro esterno della molla - External diameter of the spring - Außendurchmesser der Feder                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| <b>Di (mm)</b>         | Diametro interno della molla - Internal diameter of the spring - Innendurchmesser der Feder                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| <b>Df (mm)</b>         | Diametro del foro (entro il quale può lavorare liberamente la molla)<br>Diameter of the hole (within which the spring can operate freely)<br>Lochdurchmesser (innerhalb dessen die Feder frei arbeiten kann)                                                                                                                                                                                                                                                                                                                                                                                                                 |
| <b>Ds (mm)</b>         | Diametro della spina (sulla quale può lavorare liberamente la molla)<br>Diameter of the pin (on which the spring can operate freely)<br>Durchmesser des Stifts (auf dem die Feder frei arbeiten kann)                                                                                                                                                                                                                                                                                                                                                                                                                        |
| <b>Lo (mm)</b>         | Lunghezza libera (lunghezza della molla, non sottoposta ad alcuna forza esterna o carico)<br>Free length (length of the spring when subject to any external force or load)<br>Freie Länge (Länge der Feder, keiner externen Kraft oder Last ausgesetzt)                                                                                                                                                                                                                                                                                                                                                                      |
| <b>L1, L2, Ln (mm)</b> | Lunghezza della molla (misurata lungo l'asse, sottoposta ai carichi F1, F2, Fn)<br>Working length (measured along the axis, under loads F1, F2, Fn)<br>Länge der Feder (entlang der Achse gemessen, den Belastungen F1, F2, Fn ausgesetzt)                                                                                                                                                                                                                                                                                                                                                                                   |
| <b>Lb (mm)</b>         | Lunghezza a blocco (lunghezza minima della molla con tutte le spine a contatto)<br>Block length (minimum length of the spring with all coils in contact)<br>Blocklänge (Mindestlänge der Feder mit allen Stiften in Kontakt)                                                                                                                                                                                                                                                                                                                                                                                                 |
| <b>f1, f2, fn (mm)</b> | Frecce (differenze tra Lo, L1, L2, Ln)<br>Arrows (difference between Lo, L1, L2, Ln)<br>Pfeile (Unterschiede zwischen Lo, L1, L2, Ln)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| <b>b (mm)</b>          | Base (lato del filo misurato perpendicolarmente all'asse della molla)<br>Base (wire side measured perpendicularly to the spring axis)<br>Basis (Drahtseite, senkrecht zur Federachse gemessen)                                                                                                                                                                                                                                                                                                                                                                                                                               |
| <b>h (mm)</b>          | Altezza (lato del filo misurato parallelamente all'asse della molla)<br>Height (wire side measured in parallel to the spring axis)<br>Höhe (Drahtseite, parallel zur Federachse gemessen)                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| <b>Rg (Kg/mm)</b>      | Rigidità (variazione $F = F_2 - F_1$ del carico $F$ sopportato dalla molla, che provoca la variazione unitaria della lunghezza $L = L_2 - L_1$ ovvero della freccia $f = f_2 - f_1$ )<br>Stiffness (variation $F = F_2 - F_1$ with the load $F$ supported by the spring, which causes the unit variation in length $L = L_2 - L_1$ or of the arrow $f = f_2 - f_1$ )<br>Steifigkeit (Änderung $F = F_2 - F_1$ der von der Feder getragenen Belastung $F$ , die einheitliche Veränderung der Länge $L = L_2 - L_1$ , d.h. des Pfeils $f = f_2 - f_1$ verursacht)<br>$R_g = \Delta F / \Delta L = \Delta F / \Delta f$ (Kg/mm) |

### Campo ottimale di lavoro per lunga durata e fatica

### Optimum field of operation for long life resistance to fatigue

### Optimales Arbeitsfeld für eine lange Lebensdauer unter Belastung



Simboli della molla - Symbols of the spring - Symbole der Feder



**MOLLA GIALLA**  
 YELLOW SPRING  
 GELBE FEDER

SL / S

**SL SERIE**

CARICHI LEGGERI - LIGHT CHARGES - LEICHTE LASTEN

| DF | DS   | Lo  | RG (Kg/mm) | DF | DS | Lo  | RG (Kg/mm) |
|----|------|-----|------------|----|----|-----|------------|
| 10 | 5    | 25  | 1,00       | 26 | 13 | 102 | 1,71       |
|    |      | 32  | 0,82       |    |    | 115 | 1,52       |
|    |      | 38  | 0,64       |    |    | 127 | 1,35       |
|    |      | 44  | 0,56       |    |    | 139 | 1,20       |
|    |      | 51  | 0,48       |    |    | 152 | 1,12       |
|    |      | 64  | 0,40       |    |    | 178 | 0,93       |
|    |      | 76  | 0,31       |    |    | 203 | 0,83       |
| 13 | 7    | 25  | 1,69       | 32 | 16 | 38  | 8,95       |
|    |      | 32  | 1,29       |    |    | 44  | 7,34       |
|    |      | 38  | 1,07       |    |    | 51  | 6,51       |
|    |      | 44  | 0,89       |    |    | 64  | 5,02       |
|    |      | 51  | 0,80       |    |    | 76  | 4,15       |
|    |      | 64  | 0,63       |    |    | 89  | 3,41       |
|    |      | 76  | 0,52       |    |    | 102 | 3,05       |
|    |      | 89  | 0,53       |    |    | 115 | 2,70       |
|    |      | 102 | 0,39       |    |    | 127 | 2,41       |
|    |      | 139 |            |    |    | 139 | 2,14       |
| 16 | 8    | 25  | 2,64       | 38 | 20 | 51  | 11,20      |
|    |      | 32  | 2,15       |    |    | 64  | 8,57       |
|    |      | 38  | 1,78       |    |    | 76  | 7,04       |
|    |      | 44  | 1,58       |    |    | 89  | 5,76       |
|    |      | 51  | 1,50       |    |    | 102 | 5,13       |
|    |      | 64  | 1,04       |    |    | 115 | 4,54       |
|    |      | 76  | 0,92       |    |    | 127 | 4,04       |
|    |      | 89  | 0,77       |    |    | 139 | 3,58       |
|    |      | 102 | 0,69       |    |    | 152 | 3,33       |
|    |      | 115 | 0,57       |    |    | 178 | 2,75       |
| 20 | 10   | 25  | 5,10       | 50 | 25 | 64  | 15,08      |
|    |      | 32  | 3,90       |    |    | 76  | 12,30      |
|    |      | 38  | 3,18       |    |    | 89  | 10,50      |
|    |      | 44  | 2,67       |    |    | 102 | 8,89       |
|    |      | 51  | 2,20       |    |    | 115 | 7,85       |
|    |      | 64  | 1,82       |    |    | 127 | 7,00       |
|    |      | 76  | 1,49       |    |    | 139 | 6,46       |
|    |      | 89  | 1,28       |    |    | 152 | 5,72       |
|    |      | 102 | 1,10       |    |    | 178 | 4,91       |
|    |      | 115 | 0,98       |    |    | 203 | 4,22       |
| 26 | 13   | 25  | 8,00       | 50 | 25 | 254 | 1,17       |
|    |      | 32  | 5,95       |    |    | 315 | 0,90       |
|    |      | 38  | 4,88       |    |    | 315 | 0,90       |
|    |      | 44  | 4,04       |    |    | 315 | 0,90       |
|    |      | 51  | 3,59       |    |    | 315 | 0,90       |
|    |      | 64  | 2,79       |    |    | 315 | 0,90       |
|    |      | 76  | 2,32       |    |    | 315 | 0,90       |
| 89 | 1,91 | 315 | 0,90       |    |    |     |            |

**S SERIE**

CARICHI MEDI - MEDIUM CHARGES - MEDIUM LASTEN

| DF | DS   | Lo  | RG (Kg/mm) | DF | DS | Lo  | RG (Kg/mm) |
|----|------|-----|------------|----|----|-----|------------|
| 10 | 5    | 25  | 1,71       | 26 | 13 | 102 | 2,72       |
|    |      | 32  | 1,30       |    |    | 115 | 2,42       |
|    |      | 38  | 1,08       |    |    | 127 | 2,15       |
|    |      | 44  | 0,91       |    |    | 139 | 1,91       |
|    |      | 51  | 0,81       |    |    | 152 | 1,78       |
|    |      | 64  | 0,68       |    |    | 178 | 1,47       |
|    |      | 76  | 0,53       |    |    | 203 | 1,32       |
| 13 | 7    | 25  | 2,82       | 32 | 16 | 38  | 15,87      |
|    |      | 32  | 2,13       |    |    | 44  | 13,50      |
|    |      | 38  | 1,77       |    |    | 51  | 11,68      |
|    |      | 44  | 1,47       |    |    | 64  | 8,59       |
|    |      | 51  | 1,31       |    |    | 76  | 6,99       |
|    |      | 64  | 1,02       |    |    | 89  | 5,91       |
|    |      | 76  | 0,85       |    |    | 102 | 5,21       |
|    |      | 89  | 0,70       |    |    | 115 | 4,55       |
|    |      | 102 | 0,63       |    |    | 127 | 3,97       |
|    |      | 139 |            |    |    | 139 | 3,70       |
| 16 | 8    | 25  | 4,80       | 38 | 20 | 51  | 18,93      |
|    |      | 32  | 3,60       |    |    | 64  | 14,32      |
|    |      | 38  | 3,00       |    |    | 76  | 11,70      |
|    |      | 44  | 2,66       |    |    | 89  | 9,51       |
|    |      | 51  | 2,35       |    |    | 102 | 8,46       |
|    |      | 64  | 1,81       |    |    | 115 | 7,47       |
|    |      | 76  | 1,55       |    |    | 127 | 6,63       |
|    |      | 89  | 1,30       |    |    | 139 | 5,87       |
|    |      | 102 | 1,15       |    |    | 152 | 5,45       |
|    |      | 115 | 0,93       |    |    | 178 | 4,49       |
| 20 | 10   | 25  | 8,50       | 50 | 25 | 64  | 25,09      |
|    |      | 32  | 6,45       |    |    | 76  | 20,15      |
|    |      | 38  | 4,98       |    |    | 89  | 15,40      |
|    |      | 44  | 4,23       |    |    | 102 | 13,40      |
|    |      | 51  | 3,68       |    |    | 115 | 11,93      |
|    |      | 64  | 2,88       |    |    | 127 | 11,04      |
|    |      | 76  | 2,31       |    |    | 139 | 10,00      |
|    |      | 89  | 1,95       |    |    | 152 | 9,07       |
|    |      | 102 | 1,77       |    |    | 178 | 7,59       |
|    |      | 115 | 1,60       |    |    | 203 | 6,77       |
| 26 | 13   | 25  | 13,33      | 50 | 25 | 254 | 1,17       |
|    |      | 32  | 9,78       |    |    | 315 | 0,90       |
|    |      | 38  | 7,96       |    |    | 315 | 0,90       |
|    |      | 44  | 6,54       |    |    | 315 | 0,90       |
|    |      | 51  | 5,80       |    |    | 315 | 0,90       |
|    |      | 64  | 4,49       |    |    | 315 | 0,90       |
|    |      | 76  | 3,71       |    |    | 315 | 0,90       |
| 89 | 3,05 | 315 | 0,90       |    |    |     |            |

Esempio di ordinativo: Serie x Df x Lo

Order example: Series x Df x Lo

Bestellbeispiel: Serie x Df x Lo



**MOLLA GIALLA**  
**YELLOW SPRING**  
**GELBE FEDER**

**HL / H**

| HL SERIE                                      |    |     |            |    |    |     |            |
|-----------------------------------------------|----|-----|------------|----|----|-----|------------|
| CARICHI FORTI - STRONG CHARGES - STARK LASTEN |    |     |            |    |    |     |            |
| DF                                            | DS | Lo  | RG (Kg/mm) | DF | DS | Lo  | RG (Kg/mm) |
| 10                                            | 5  | 25  | 2,66       | 26 | 13 | 102 | 4,19       |
|                                               |    | 32  | 2,00       |    |    | 115 | 3,71       |
|                                               |    | 38  | 1,68       |    |    | 127 | 3,30       |
|                                               |    | 44  | 1,40       |    |    | 139 | 2,93       |
|                                               |    | 51  | 1,25       |    |    | 152 | 2,73       |
|                                               |    | 64  | 1,00       |    |    | 178 | 2,25       |
|                                               |    | 76  | 0,81       |    |    | 203 | 2,02       |
| 13                                            | 7  | 25  | 4,46       | 32 | 16 | 38  | 23,24      |
|                                               |    | 32  | 3,35       |    |    | 44  | 18,77      |
|                                               |    | 38  | 2,76       |    |    | 51  | 16,50      |
|                                               |    | 44  | 2,29       |    |    | 64  | 12,50      |
|                                               |    | 51  | 2,04       |    |    | 76  | 10,29      |
|                                               |    | 64  | 1,59       |    |    | 89  | 8,39       |
|                                               |    | 76  | 1,32       |    |    | 102 | 7,47       |
|                                               |    | 89  | 1,09       |    |    | 115 | 6,60       |
| 16                                            | 8  | 25  | 7,46       | 38 | 20 | 51  | 32,00      |
|                                               |    | 32  | 5,55       |    |    | 64  | 24,47      |
|                                               |    | 38  | 4,55       |    |    | 76  | 19,64      |
|                                               |    | 44  | 3,96       |    |    | 89  | 16,07      |
|                                               |    | 51  | 3,45       |    |    | 102 | 14,10      |
|                                               |    | 64  | 2,70       |    |    | 115 | 12,54      |
|                                               |    | 76  | 2,36       |    |    | 127 | 11,21      |
|                                               |    | 89  | 1,94       |    |    | 139 | 9,90       |
| 20                                            | 10 | 25  | 12,66      | 50 | 25 | 64  | 39,68      |
|                                               |    | 32  | 9,32       |    |    | 76  | 31,86      |
|                                               |    | 38  | 7,60       |    |    | 89  | 26,56      |
|                                               |    | 44  | 6,26       |    |    | 102 | 22,58      |
|                                               |    | 51  | 5,56       |    |    | 115 | 19,82      |
|                                               |    | 64  | 4,30       |    |    | 127 | 17,49      |
|                                               |    | 76  | 3,56       |    |    | 139 | 15,41      |
|                                               |    | 89  | 2,92       |    |    | 152 | 14,27      |
|                                               |    | 102 | 2,62       |    |    | 178 | 11,99      |
|                                               |    | 115 | 2,32       |    |    | 203 | 10,93      |
| 26                                            | 13 | 25  | 21,33      | 50 | 25 | 254 | 8,22       |
|                                               |    | 32  | 15,44      |    |    | 315 | 6,44       |
|                                               |    | 38  | 12,48      |    |    |     |            |
|                                               |    | 44  | 10,21      |    |    |     |            |
|                                               |    | 51  | 9,03       |    |    |     |            |
|                                               |    | 64  | 6,94       |    |    |     |            |
|                                               |    | 76  | 5,72       |    |    |     |            |

| H SERIE                                                         |    |     |            |    |    |     |            |
|-----------------------------------------------------------------|----|-----|------------|----|----|-----|------------|
| CARICHI EXTRA FORTI - EXTRA STRONG CHARGES - EXTRA STARK LASTEN |    |     |            |    |    |     |            |
| DF                                                              | DS | Lo  | RG (Kg/mm) | DF | DS | Lo  | RG (Kg/mm) |
| 10                                                              | 5  | 25  | 4,00       | 26 | 13 | 127 | 5,40       |
|                                                                 |    | 32  | 3,02       |    |    | 139 | 4,78       |
|                                                                 |    | 38  | 2,50       |    |    | 152 | 4,45       |
|                                                                 |    | 44  | 2,08       |    |    | 178 | 3,67       |
|                                                                 |    | 51  | 1,86       |    |    | 203 | 3,29       |
|                                                                 |    | 64  | 1,45       |    |    |     |            |
|                                                                 |    | 76  | 1,21       |    |    |     |            |
| 13                                                              | 7  | 25  | 6,80       | 32 | 16 | 38  | 35,26      |
|                                                                 |    | 32  | 5,07       |    |    | 44  | 28,26      |
|                                                                 |    | 38  | 4,17       |    |    | 51  | 24,25      |
|                                                                 |    | 44  | 3,45       |    |    | 64  | 18,71      |
|                                                                 |    | 51  | 3,07       |    |    | 76  | 15,27      |
|                                                                 |    | 64  | 2,39       |    |    | 89  | 12,42      |
|                                                                 |    | 76  | 1,98       |    |    | 102 | 11,04      |
|                                                                 |    | 89  | 1,63       |    |    | 115 | 9,75       |
| 16                                                              | 8  | 25  | 11,36      | 38 | 20 | 51  | 44,80      |
|                                                                 |    | 32  | 8,38       |    |    | 64  | 33,20      |
|                                                                 |    | 38  | 6,84       |    |    | 76  | 26,79      |
|                                                                 |    | 44  | 5,63       |    |    | 89  | 21,59      |
|                                                                 |    | 51  | 5,00       |    |    | 102 | 19,11      |
|                                                                 |    | 64  | 3,87       |    |    | 115 | 16,80      |
|                                                                 |    | 76  | 3,21       |    |    | 127 | 14,86      |
|                                                                 |    | 89  | 2,74       |    |    | 139 | 13,10      |
| 20                                                              | 10 | 25  | 18,88      | 50 | 25 | 64  | 64,31      |
|                                                                 |    | 32  | 13,76      |    |    | 76  | 51,44      |
|                                                                 |    | 38  | 11,17      |    |    | 89  | 41,30      |
|                                                                 |    | 44  | 9,15       |    |    | 102 | 35,74      |
|                                                                 |    | 51  | 8,10       |    |    | 115 | 31,53      |
|                                                                 |    | 64  | 6,25       |    |    | 127 | 27,50      |
|                                                                 |    | 76  | 5,16       |    |    | 139 | 23,86      |
|                                                                 |    | 89  | 4,23       |    |    | 152 | 22,15      |
|                                                                 |    | 102 | 3,78       |    |    | 178 | 18,58      |
|                                                                 |    | 115 | 3,35       |    |    | 203 | 16,50      |
| 26                                                              | 13 | 38  | 21,05      | 50 | 25 | 254 | 13,30      |
|                                                                 |    | 44  | 17,07      |    |    | 315 | 10,48      |
|                                                                 |    | 51  | 15,04      |    |    |     |            |
|                                                                 |    | 64  | 11,49      |    |    |     |            |
|                                                                 |    | 76  | 9,43       |    |    |     |            |
|                                                                 |    | 89  | 7,70       |    |    |     |            |
|                                                                 |    | 102 | 6,87       |    |    |     |            |

**Esempio di ordinativo:** Serie x Df x Lo    **Order example:** Series x Df x Lo    **Bestellbeispiel:** Serie x Df x Lo

**MOLLA ISO 10243**  
 ISO 10243 SPRING  
 ISO 10243 FEDER

NEW

BL



**BL SERIE / PORPORA - PURPLE - PURPLE**

CARICHI EXTRA LEGGERI - EXTRA LIGHT CHARGES - SEHR LEICHTE LASTEN

| DF  | DS   | Lo  | RG<br>(Kg/mm) | DF | DS | Lo  | RG<br>(Kg/mm) |
|-----|------|-----|---------------|----|----|-----|---------------|
| 20  | 10   | 25  | 3,28          | 32 | 16 | 38  | 4,47          |
|     |      | 32  | 2,52          |    |    | 44  | 3,83          |
|     |      | 38  | 2,11          |    |    | 51  | 3,30          |
|     |      | 44  | 1,82          |    |    | 64  | 2,59          |
|     |      | 51  | 1,56          |    |    | 76  | 2,17          |
|     |      | 64  | 1,23          |    |    | 89  | 1,85          |
|     |      | 76  | 1,04          |    |    | 102 | 1,61          |
|     |      | 89  | 0,88          |    |    | 115 | 1,42          |
|     |      | 102 | 0,77          |    |    | 127 | 1,29          |
|     |      | 115 | 0,68          |    |    | 139 | 1,16          |
|     |      | 127 | 0,62          |    |    | 152 | 1,07          |
|     |      | 139 | 0,56          |    |    | 178 | 0,91          |
|     |      | 152 | 0,52          |    |    | 203 | 0,80          |
|     |      | 305 | 0,26          |    |    | 254 | 0,63          |
|     |      | 25  | 12,5          |    |    | 25  | 5,38          |
| 32  | 4,08 |     |               |    |    |     |               |
| 38  | 3,40 |     |               |    |    |     |               |
| 44  | 2,92 |     |               |    |    |     |               |
| 51  | 2,52 |     |               |    |    |     |               |
| 64  | 1,98 |     |               |    |    |     |               |
| 76  | 1,66 |     |               |    |    |     |               |
| 89  | 1,42 |     |               |    |    |     |               |
| 102 | 1,23 |     |               |    |    |     |               |
| 115 | 1,10 |     |               |    |    |     |               |
| 127 | 1,00 |     |               |    |    |     |               |
| 139 | 0,91 |     |               |    |    |     |               |
| 152 | 0,83 |     |               |    |    |     |               |
| 178 | 0,70 |     |               |    |    |     |               |
| 203 | 0,62 |     |               |    |    |     |               |
| 305 | 0,41 |     |               |    |    |     |               |

**BL SERIE / PORPORA - PURPLE - PURPLE**

CARICHI EXTRA LEGGERI - EXTRA LIGHT CHARGES - SEHR LEICHTE LASTEN

| DF | Lo | DS  | RG<br>(Kg/mm) | DF | Lo | DS  | RG<br>(Kg/mm) |
|----|----|-----|---------------|----|----|-----|---------------|
| 40 | 20 | 51  | 5,18          | 50 | 25 | 64  | 8,18          |
|    |    | 64  | 4,05          |    |    | 76  | 6,83          |
|    |    | 76  | 3,38          |    |    | 89  | 5,78          |
|    |    | 89  | 2,87          |    |    | 102 | 5,03          |
|    |    | 102 | 2,50          |    |    | 115 | 4,44          |
|    |    | 115 | 2,20          |    |    | 127 | 4,01          |
|    |    | 127 | 1,99          |    |    | 139 | 3,65          |
|    |    | 139 | 1,82          |    |    | 152 | 3,35          |
|    |    | 152 | 1,66          |    |    | 178 | 2,84          |
|    |    | 178 | 1,41          |    |    | 203 | 2,47          |
|    |    | 203 | 1,23          |    |    | 254 | 1,96          |
|    |    | 254 | 0,99          |    |    | 305 | 1,63          |
|    |    | 305 | 0,82          |    |    |     |               |

**Esempio di ordinativo:** Serie x Df x Lo

**Order example:** Series x Df x Lo

**Bestellbeispiel:** Serie x Df x Lo



**CL SERIE / VERDE - GREEN - GRÜN**

| CARICHI LEGGERI - LIGHT CHARGES - LEICHTE LASTEN |      |     |            |     |      |     |            |
|--------------------------------------------------|------|-----|------------|-----|------|-----|------------|
| DF                                               | DS   | Lo  | RG (Kg/mm) | DF  | DS   | Lo  | RG (Kg/mm) |
| 10                                               | 5    | 25  | 1,02       | 26  | 13,5 | 102 | 2,15       |
|                                                  |      | 32  | 0,87       |     |      | 115 | 1,91       |
|                                                  |      | 38  | 0,69       |     |      | 127 | 1,70       |
|                                                  |      | 44  | 0,61       |     |      | 139 | 1,56       |
|                                                  |      | 51  | 0,51       |     |      | 152 | 1,43       |
|                                                  |      | 64  | 0,44       |     |      | 178 | 1,28       |
|                                                  |      | 76  | 0,33       |     |      | 203 | 1,06       |
|                                                  |      | 305 | 0,11       |     |      | 305 | 0,71       |
| 12,5                                             | 6,3  | 25  | 1,83       | 32  | 16   | 38  | 9,59       |
|                                                  |      | 32  | 1,67       |     |      | 44  | 8,11       |
|                                                  |      | 38  | 1,39       |     |      | 51  | 6,83       |
|                                                  |      | 44  | 1,23       |     |      | 64  | 5,40       |
|                                                  |      | 51  | 1,16       |     |      | 76  | 4,49       |
|                                                  |      | 64  | 0,95       |     |      | 89  | 3,79       |
|                                                  |      | 76  | 0,72       |     |      | 102 | 3,26       |
|                                                  |      | 89  | 0,55       |     |      | 115 | 2,96       |
| 16                                               | 8    | 25  | 2,39       | 40  | 20   | 51  | 9,38       |
|                                                  |      | 32  | 2,34       |     |      | 64  | 7,45       |
|                                                  |      | 38  | 1,97       |     |      | 76  | 6,43       |
|                                                  |      | 44  | 1,74       |     |      | 89  | 5,20       |
|                                                  |      | 51  | 1,60       |     |      | 102 | 4,39       |
|                                                  |      | 64  | 1,09       |     |      | 115 | 4,04       |
|                                                  |      | 76  | 1,02       |     |      | 127 | 3,77       |
|                                                  |      | 89  | 0,88       |     |      | 139 | 3,26       |
| 20                                               | 10   | 25  | 5,69       | 50  | 25   | 64  | 15,91      |
|                                                  |      | 32  | 4,59       |     |      | 76  | 12,75      |
|                                                  |      | 38  | 3,40       |     |      | 89  | 11,12      |
|                                                  |      | 44  | 3,06       |     |      | 102 | 9,59       |
|                                                  |      | 51  | 2,50       |     |      | 115 | 8,26       |
|                                                  |      | 64  | 2,04       |     |      | 127 | 7,24       |
|                                                  |      | 76  | 1,63       |     |      | 139 | 6,78       |
|                                                  |      | 89  | 1,43       |     |      | 152 | 6,12       |
| 26                                               | 13,5 | 25  | 10,20      | 178 | 5,30 | 203 | 4,49       |
|                                                  |      | 32  | 8,19       |     |      | 254 | 3,57       |
|                                                  |      | 38  | 6,32       |     |      | 305 | 2,91       |
|                                                  |      | 44  | 5,40       |     |      |     |            |
|                                                  |      | 51  | 4,49       |     |      |     |            |
|                                                  |      | 64  | 3,59       |     |      |     |            |
|                                                  |      | 76  | 2,86       |     |      |     |            |
|                                                  |      | 89  | 2,45       |     |      |     |            |

**CM SERIE / BLU - BLUE - BLAU**

| CARICHI MEDI - MEDIUM CHARGES - MEDIUM LASTEN |      |     |            |     |      |     |            |
|-----------------------------------------------|------|-----|------------|-----|------|-----|------------|
| DF                                            | DS   | Lo  | RG (Kg/mm) | DF  | DS   | Lo  | RG (Kg/mm) |
| 10                                            | 5    | 25  | 1,63       | 26  | 13,5 | 102 | 3,37       |
|                                               |      | 32  | 1,33       |     |      | 115 | 2,86       |
|                                               |      | 38  | 1,21       |     |      | 127 | 2,64       |
|                                               |      | 44  | 1,05       |     |      | 139 | 2,37       |
|                                               |      | 51  | 0,91       |     |      | 152 | 2,12       |
|                                               |      | 64  | 0,77       |     |      | 178 | 1,82       |
|                                               |      | 76  | 0,54       |     |      | 203 | 1,61       |
|                                               |      | 305 | 0,16       |     |      | 305 | 1,04       |
| 12,5                                          | 6,3  | 25  | 3,06       | 32  | 16   | 38  | 18,87      |
|                                               |      | 32  | 2,53       |     |      | 44  | 16,12      |
|                                               |      | 38  | 2,18       |     |      | 51  | 13,67      |
|                                               |      | 44  | 1,89       |     |      | 64  | 10,10      |
|                                               |      | 51  | 1,58       |     |      | 76  | 8,21       |
|                                               |      | 64  | 1,23       |     |      | 89  | 7,05       |
|                                               |      | 76  | 1,04       |     |      | 102 | 6,00       |
|                                               |      | 89  | 0,86       |     |      | 115 | 5,25       |
| 16                                            | 8    | 25  | 5,04       | 40  | 20   | 51  | 18,52      |
|                                               |      | 32  | 3,78       |     |      | 64  | 14,28      |
|                                               |      | 38  | 3,46       |     |      | 76  | 11,02      |
|                                               |      | 44  | 3,06       |     |      | 89  | 9,25       |
|                                               |      | 51  | 2,69       |     |      | 102 | 8,26       |
|                                               |      | 64  | 2,09       |     |      | 115 | 7,32       |
|                                               |      | 76  | 1,82       |     |      | 127 | 6,40       |
|                                               |      | 89  | 1,55       |     |      | 139 | 5,87       |
| 20                                            | 10   | 25  | 10         | 50  | 25   | 64  | 21,32      |
|                                               |      | 32  | 7,41       |     |      | 76  | 17,14      |
|                                               |      | 38  | 5,71       |     |      | 89  | 14,28      |
|                                               |      | 44  | 4,85       |     |      | 102 | 12,14      |
|                                               |      | 51  | 4,25       |     |      | 115 | 10,81      |
|                                               |      | 64  | 3,29       |     |      | 127 | 9,89       |
|                                               |      | 76  | 2,56       |     |      | 139 | 8,87       |
|                                               |      | 89  | 2,24       |     |      | 152 | 8,16       |
| 26                                            | 13,5 | 25  | 14,99      | 178 | 5,30 | 203 | 6,10       |
|                                               |      | 32  | 12,04      |     |      | 229 | 5,19       |
|                                               |      | 38  | 9,49       |     |      | 254 | 4,48       |
|                                               |      | 44  | 8,24       |     |      | 305 | 3,94       |
|                                               |      | 51  | 7,00       |     |      |     |            |
|                                               |      | 64  | 5,41       |     |      |     |            |
|                                               |      | 76  | 4,41       |     |      |     |            |
|                                               |      | 89  | 3,90       |     |      |     |            |

**Esempio di ordinativo:** Serie x Df x Lo    **Order example:** Series x Df x Lo    **Bestellbeispiel:** Serie x Df x Lo



**MOLLA ISO 10243**  
 ISO 10243 SPRING  
 ISO 10243 FEDER

**CF / CXF**

**CF SERIE / ROSSO - RED - ROT**

CARICHI FORTI - STRONG CHARGES - STARK LASTEN

| DF  | DS   | Lo   | RG (Kg/mm) | DF  | DS    | Lo  | RG (Kg/mm) |    |    |    |       |
|-----|------|------|------------|-----|-------|-----|------------|----|----|----|-------|
| 10  | 5    | 25   | 2,25       | 26  | 12,5  | 102 | 7,45       |    |    |    |       |
|     |      | 32   | 1,79       |     |       | 115 | 6,63       |    |    |    |       |
|     |      | 38   | 1,74       |     |       | 127 | 5,89       |    |    |    |       |
|     |      | 44   | 1,53       |     |       | 139 | 5,38       |    |    |    |       |
|     |      | 51   | 1,31       |     |       | 152 | 4,88       |    |    |    |       |
|     |      | 64   | 1,09       |     |       | 178 | 4,18       |    |    |    |       |
|     |      | 76   | 0,77       |     |       | 203 | 3,65       |    |    |    |       |
|     |      | 305  | 0,21       |     |       | 305 | 2,34       |    |    |    |       |
|     |      | 12,5 | 6,3        |     |       | 25  | 4,29       | 32 | 16 | 38 | 39,58 |
|     |      |      |            |     |       | 32  | 3,39       |    |    | 44 | 33,05 |
| 38  | 2,99 |      |            | 51  | 27,74 |     |            |    |    |    |       |
| 44  | 2,51 |      |            | 64  | 21,62 |     |            |    |    |    |       |
| 51  | 2,00 |      |            | 76  | 17,54 |     |            |    |    |    |       |
| 64  | 1,53 |      |            | 89  | 14,38 |     |            |    |    |    |       |
| 76  | 1,35 |      |            | 102 | 12,44 |     |            |    |    |    |       |
| 89  | 1,16 |      |            | 115 | 10,91 |     |            |    |    |    |       |
| 305 | 0,29 |      |            | 127 | 9,49  |     |            |    |    |    |       |
| 16  | 8    |      |            | 25  | 7,72  | 40  | 20         |    |    | 51 | 35,70 |
|     |      | 32   | 5,39       | 64  | 27,44 |     |            |    |    |    |       |
|     |      | 38   | 4,95       | 76  | 22,34 |     |            |    |    |    |       |
|     |      | 44   | 4,37       | 89  | 19,38 |     |            |    |    |    |       |
|     |      | 51   | 3,78       | 102 | 16,63 |     |            |    |    |    |       |
|     |      | 64   | 3,09       | 115 | 14,48 |     |            |    |    |    |       |
|     |      | 76   | 2,62       | 127 | 13,06 |     |            |    |    |    |       |
|     |      | 89   | 2,21       | 139 | 11,73 |     |            |    |    |    |       |
|     |      | 102  | 2,00       | 152 | 10,71 |     |            |    |    |    |       |
|     |      | 305  | 0,72       | 178 | 9,08  |     |            |    |    |    |       |
| 20  | 10   | 25   | 22,03      | 50  | 25    | 64  | 42,13      |    |    |    |       |
|     |      | 32   | 17,14      |     |       | 76  | 34,58      |    |    |    |       |
|     |      | 38   | 13,16      |     |       | 89  | 29,38      |    |    |    |       |
|     |      | 44   | 11,42      |     |       | 102 | 24,99      |    |    |    |       |
|     |      | 51   | 9,59       |     |       | 115 | 21,93      |    |    |    |       |
|     |      | 64   | 7,35       |     |       | 127 | 19,58      |    |    |    |       |
|     |      | 76   | 6,09       |     |       | 139 | 17,14      |    |    |    |       |
|     |      | 89   | 5,15       |     |       | 152 | 15,71      |    |    |    |       |
|     |      | 102  | 4,51       |     |       | 178 | 13,67      |    |    |    |       |
|     |      | 115  | 3,92       |     |       | 203 | 11,93      |    |    |    |       |
| 26  | 12,5 | 25   | 38,25      | 50  | 25    | 64  | 42,13      |    |    |    |       |
|     |      | 32   | 30,29      |     |       | 76  | 34,58      |    |    |    |       |
|     |      | 38   | 22,34      |     |       | 89  | 29,38      |    |    |    |       |
|     |      | 44   | 19,07      |     |       | 102 | 24,99      |    |    |    |       |
|     |      | 51   | 15,91      |     |       | 115 | 21,93      |    |    |    |       |
|     |      | 64   | 12,55      |     |       | 127 | 19,58      |    |    |    |       |
|     |      | 76   | 10,10      |     |       | 139 | 17,14      |    |    |    |       |
|     |      | 89   | 8,57       |     |       | 152 | 15,71      |    |    |    |       |
|     |      |      |            |     |       | 178 | 13,67      |    |    |    |       |
|     |      |      |            |     |       | 203 | 11,93      |    |    |    |       |

**CXF SERIE / GIALLO - YELLOW - GELB**

CARICHI EXTRA FORTI - EXTRA STRONG CHARGES - EXTRA STARK LASTEN

| DF  | DS   | Lo   | RG (Kg/mm) | DF  | DS    | Lo  | RG (Kg/mm) |    |    |    |       |
|-----|------|------|------------|-----|-------|-----|------------|----|----|----|-------|
| 10  | 5    | 25   | 3,75       | 26  | 12,5  | 115 | 8,74       |    |    |    |       |
|     |      | 32   | 2,85       |     |       | 127 | 7,78       |    |    |    |       |
|     |      | 38   | 2,42       |     |       | 139 | 6,89       |    |    |    |       |
|     |      | 44   | 1,96       |     |       | 152 | 6,48       |    |    |    |       |
|     |      | 51   | 1,68       |     |       | 178 | 5,50       |    |    |    |       |
|     |      | 64   | 1,35       |     |       | 203 | 4,79       |    |    |    |       |
|     |      | 76   | 1,12       |     |       | 305 | 3,15       |    |    |    |       |
|     |      | 305  | 0,27       |     |       |     |            |    |    |    |       |
|     |      | 12,5 | 6,3        |     |       | 25  | 5,97       | 32 | 16 | 38 | 53,88 |
|     |      |      |            |     |       | 32  | 4,48       |    |    | 44 | 43,29 |
| 38  | 3,67 |      |            | 51  | 36,01 |     |            |    |    |    |       |
| 44  | 3,09 |      |            | 64  | 27,46 |     |            |    |    |    |       |
| 51  | 2,67 |      |            | 76  | 22,29 |     |            |    |    |    |       |
| 64  | 2,16 |      |            | 89  | 18,39 |     |            |    |    |    |       |
| 76  | 1,74 |      |            | 102 | 15,81 |     |            |    |    |    |       |
| 89  | 1,48 |      |            | 115 | 14,28 |     |            |    |    |    |       |
| 305 | 0,44 |      |            | 127 | 12,65 |     |            |    |    |    |       |
| 16  | 8    |      |            | 25  | 12,04 | 40  | 20         |    |    | 51 | 64,06 |
|     |      | 32   | 9,08       | 64  | 49,77 |     |            |    |    |    |       |
|     |      | 38   | 7,35       | 76  | 38,66 |     |            |    |    |    |       |
|     |      | 44   | 6,21       | 89  | 32,74 |     |            |    |    |    |       |
|     |      | 51   | 5,33       | 102 | 28,66 |     |            |    |    |    |       |
|     |      | 64   | 4,20       | 115 | 24,99 |     |            |    |    |    |       |
|     |      | 76   | 3,48       | 127 | 22,54 |     |            |    |    |    |       |
|     |      | 89   | 3,01       | 152 | 17,14 |     |            |    |    |    |       |
|     |      | 102  | 2,61       | 203 | 13,46 |     |            |    |    |    |       |
|     |      | 305  | 0,86       | 254 | 10,91 |     |            |    |    |    |       |
| 20  | 10   | 25   | 29,89      | 50  | 25    | 64  | 72,32      |    |    |    |       |
|     |      | 32   | 22,85      |     |       | 76  | 58,34      |    |    |    |       |
|     |      | 38   | 18,05      |     |       | 89  | 48,45      |    |    |    |       |
|     |      | 44   | 15,20      |     |       | 102 | 41,31      |    |    |    |       |
|     |      | 51   | 13,06      |     |       | 115 | 35,90      |    |    |    |       |
|     |      | 64   | 10,10      |     |       | 127 | 32,23      |    |    |    |       |
|     |      | 76   | 8,83       |     |       | 152 | 24,38      |    |    |    |       |
|     |      | 89   | 7,09       |     |       | 203 | 19,07      |    |    |    |       |
|     |      | 102  | 6,18       |     |       | 254 | 15,61      |    |    |    |       |
|     |      | 115  | 5,41       |     |       | 305 | 12,95      |    |    |    |       |
| 26  | 12,5 | 32   | 38,19      | 50  | 25    | 64  | 72,32      |    |    |    |       |
|     |      | 38   | 35,29      |     |       | 76  | 58,34      |    |    |    |       |
|     |      | 44   | 24,89      |     |       | 89  | 48,45      |    |    |    |       |
|     |      | 51   | 21,17      |     |       | 102 | 41,31      |    |    |    |       |
|     |      | 64   | 16,42      |     |       | 115 | 35,90      |    |    |    |       |
|     |      | 76   | 13,34      |     |       | 127 | 32,23      |    |    |    |       |
|     |      | 89   | 11,27      |     |       | 152 | 24,38      |    |    |    |       |
|     |      | 102  | 9,82       |     |       | 203 | 19,07      |    |    |    |       |
|     |      |      |            |     |       | 254 | 15,61      |    |    |    |       |
|     |      |      |            |     |       | 305 | 12,95      |    |    |    |       |

**Esempio di ordinativo:** Serie x Df x Lo    **Order example:** Series x Df x Lo    **Bestellbeispiel:** Serie x Df x Lo