

4387..

Verstellbare Läppahlen

Rodoirs extensibles

Extens.lapping broaches

- Oberflächen-Fertigbearbeitung einer Bohrung
- Korrektur Härteverzüge/Unrundheiten
- Auswechselbare Hülsen aus Avional für hartes Material wie Stahl,Stahlguss, Grauguss usw. oder Weichstahl geeignet für "weiches Material" wie Aluminiumlegierungen, weiche Kupferlegierungen usw. Ø 6 - 55 mm
- aus 1 Stück Ganzstahl v.Ø 2- 5.5 mm
- Läppahle m.Läpppaste bestreichen u.bei Drehender Bohrung auf & ab bewegen

- *Facilite la finition des trous*
- *Déformations de la trempe et le faux rond peuvent être rapidement corrigés*
- *Rodoirs à douilles interchangeables en avional pour matière "dure", comme acier, fonte etc.ou en acier doux pour matière"douce", comme alliages d'aluminium, alliages de cuivre tendre etc., Ø de 6 à 55 mm*
- *Monoblocs en acier doux Øde2à5.5 mm. Il suffit de tourner le rodoir enduit d'une pâte abrasive dans le trous.*

- Surface finishing of bore holes
- correction of hardness deformations and out-of roundness interchangeable
- of bushings from Avional for hard materials like steel,cast steel, cast iron etc. or soft steel suitable for "soft materials" like aluminium alloys, soft copper alloys etc. Ø 6 - 55 mm from 1 pce entire steel of Ø2-5.5 mm
- coat lapping paste on broach and move broach up and down by simultaneously turning in the hole



4387.. 4387M..  
4387A..

| 4.387217   |  |  |                                  | aus Weichstahl<br>en acier doux/soft steel |                                  | aus Avional<br>en avional        |                                  | aus Weichstahl<br>en acier doux                          |  |  |                                  | aus Avional<br>en avional        |  |  |  |                                  |                                  |
|--|--|--|----------------------------------|--|----------------------------------|----------------------------------|----------------------------------|--|--|--|----------------------------------|----------------------------------|--|--|--|----------------------------------|----------------------------------|
| Minimal Durchmesser<br>diamètre minimal/ diam. min. min. | Länge des Körpers<br>Longueur du corps/body length | Nutzlänge der Hülsen/bushing length<br>Longueur utile des douilles | Best.Nr.<br>no.cde.<br>order no. | Best.Nr.<br>no.cde.<br>order no.           | Best.Nr.<br>no.cde.<br>order no. | Best.Nr.<br>no.cde.<br>order no. | Best.Nr.<br>no.cde.<br>order no. | Minimal Durchmesser<br>diamètre minimal/ diam. min. min. | Länge des Körpers<br>Longueur du corps/body length | Nutzlänge der Hülsen/bushing length<br>Longueur utile des douilles | Best.Nr.<br>no.cde.<br>order no. | Best.Nr.<br>no.cde.<br>order no. | Minimal Durchmesser<br>diamètre minimal/ diam. min. min. | Länge des Körpers<br>Longueur du corps/body length | Nutzlänge der Hülsen/bushing length<br>Longueur utile des douilles | Best.Nr.<br>no.cde.<br>order no. | Best.Nr.<br>no.cde.<br>order no. |
|  |  |  |                                  |  |                                  |                                  |                                  |  |  |  |                                  |                                  |  |  |  |                                  |                                  |
| 2,0  | 75   | 28   | 33,90                            |  |                                  |                                  |                                  | 17,0   | 190  | 70   | 79,20                            |                                  | 36,0   | 255  | 85   | 247,40                           | 247,40                           |
| 2,5  | 75   | 28   | 33,90                            |  |                                  |                                  |                                  | 18,0   | 190  | 70   | 83,30                            |                                  | 37,0   | 255  | 85   | 255,20                           | 255,20                           |
| 3,0  | 82   | 30   | 33,90                            |  |                                  |                                  |                                  | 19,0   | 205  | 70   | 90,30                            |                                  | 38,0   | 255  | 85   | 257,80                           | 257,80                           |
| 3,5  | 82   | 30   | 33,90                            |  |                                  |                                  |                                  | 20,0   | 205  | 70   | 93,30                            |                                  | 39,0   | 255  | 85   | 276,00                           | 276,00                           |
| 4,0  | 95   | 34   | 33,90                            |  |                                  |                                  |                                  | 21,0   | 220  | 85   | 106,80                           |                                  | 40,0   | 255  | 85   | 283,80                           | 283,80                           |
| 4,5  | 95   | 34   | 33,90                            |  |                                  |                                  |                                  | 22,0   | 220  | 85   | 112,00                           |                                  | 41,0   | 255  | 85   | 289,00                           | 289,00                           |
| 5,0  | 95   | 34   | 33,90                            |  |                                  |                                  |                                  | 23,0   | 230  | 85   | 123,20                           |                                  | 42,0   | 255  | 85   | 295,60                           | 295,60                           |
| 5,5  | 95   | 34   | 33,90                            |  |                                  |                                  |                                  | 24,0   | 230  | 85   | 133,20                           |                                  | 43,0   | 255  | 85   | 320,30                           | 320,30                           |
| 6,0  | 145  | 43   |                                  | 69,00                                      | 69,00                            |                                  |                                  | 25,0   | 230  | 85   | 138,00                           |                                  | 44,0   | 255  | 85   | 330,70                           | 330,70                           |
| 7,0  | 145  | 43   |                                  | 69,00                                      | 69,00                            |                                  |                                  | 26,0   | 235  | 85   | 151,00                           |                                  | 45,0   | 255  | 85   | 338,50                           | 338,50                           |
| 8,0  | 145  | 43   |                                  | 69,00                                      | 69,00                            |                                  |                                  | 27,0   | 235  | 85   | 159,70                           |                                  | 46,0   | 255  | 85   | 359,40                           | 359,40                           |
| 9,0  | 155  | 50   |                                  | 69,00                                      | 69,00                            |                                  |                                  | 28,0   | 235  | 85   | 170,60                           |                                  | 47,0   | 255  | 85   | 372,40                           | 372,40                           |
| 10,0   | 155  | 50   |                                  | 69,00                                      | 69,00                            |                                  |                                  | 29,0   | 235  | 85   | 174,00                           |                                  | 48,0   | 255  | 85   | 382,80                           | 382,80                           |
| 11,0   | 155  | 50   |                                  | 69,00                                      | 69,00                            |                                  |                                  | 30,0   | 245  | 85   | 182,30                           |                                  | 49,0   | 255  | 85   | 406,20                           | 406,20                           |
| 12,0   | 155  | 50   |                                  | 69,00                                      | 69,00                            |                                  |                                  | 31,0   | 245  | 85   | 195,30                           |                                  | 50,0   | 255  | 85   | 416,60                           | 416,60                           |
| 13,0   | 175  | 60   |                                  | 71,60                                      | 71,60                            |                                  |                                  | 32,0   | 245  | 85   | 203,10                           |                                  | 51,0   | 255  | 85   | 428,40                           | 428,40                           |
| 14,0   | 175  | 60   |                                  | 72,90                                      | 72,90                            |                                  |                                  | 33,0   | 245  | 85   | 221,30                           |                                  | 52,0   | 255  | 85   | 437,50                           | 437,50                           |
| 15,0   | 175  | 60   |                                  | 74,20                                      | 74,20                            |                                  |                                  | 34,0   | 245  | 85   | 227,90                           |                                  | 53,0   | 255  | 85   | 453,10                           | 453,10                           |
| 16,0   | 175  | 60   |                                  | 75,10                                      | 75,10                            |                                  |                                  | 35,0   | 245  | 85   | 223,00                           |                                  | 54,0   | 255  | 85   | 463,50                           | 463,50                           |

4387H/  
HA..

Sprezhülsen

Douilles fendues

Bushings

- aus Weichstahl Art. 4387H..
- aus Avional Art. 4387HA..

- *en acier doux art. 4387H..*
- *en avional art. 4387HA..*

- from soft steel order no. 4387H..
- from Avional order no. 4387HA..

Auswechseln der Hülsen:

Echange de la douille:

Exchange of bushings:

- Mutter 1 u.abgenutzte Hülse entfernen
- Mutter 3 ganz nach vorne gegen den Konus schrauben
- neue Hülse aufsetzen u.Gegenmutter 1 aufschrauben und festziehen
- Neue Hülse 2, die mit 0.3 mm Übermass geliefert wird, auf das gewünschte Mass abdrehen

- Enlever l'écrou 1 et la douille 2
- Visser l'écrou 3 à fond sur la tige contre le cône
- Placer la nouvelle douille et visser l'écrou 1 à fond
- Usiner au diamètre voulu la nouvelle douille 2 qui est livrée avec 0.3 mm de surcôte

- remove nut 1 and used bushing
- screw nut 3 in front against cone
- attach new bushing 2 and counter nut 1 and fix securely
- adjust new bushing 2, which is delivered with an oversize of 0.3mm, to the required dimension by turning



N° 387

3  
2  
1

| 4.387H217                               |  |                                  |                                  | aus Weichstahl<br>en acier doux/soft steel |                                  | aus Avional<br>en avional        |                                  | aus Weichstahl<br>en acier doux/soft steel |  |                                  |                                  | aus Avional<br>en avional               |  |                                  |                                  |
|---|--|----------------------------------|----------------------------------|--|----------------------------------|----------------------------------|----------------------------------|--|--|----------------------------------|----------------------------------|---|--|----------------------------------|----------------------------------|
| Minimal Durchmesser<br>diamètre minimal | Nutzlänge der Hülsen<br>Longueur utile des douilles<br>useful bushing length | Best.Nr.<br>no.cde.<br>order no. | Best.Nr.<br>no.cde.<br>order no. | Best.Nr.<br>no.cde.<br>order no.           | Best.Nr.<br>no.cde.<br>order no. | Best.Nr.<br>no.cde.<br>order no. | Best.Nr.<br>no.cde.<br>order no. | Minimal Durchmesser<br>diamètre minimal    | Nutzlänge der Hülsen<br>Longueur utile des douilles<br>useful bushing length | Best.Nr.<br>no.cde.<br>order no. | Best.Nr.<br>no.cde.<br>order no. | Minimal Durchmesser<br>diamètre minimal | Nutzlänge der Hülsen<br>Longueur utile des douilles<br>useful bushing length | Best.Nr.<br>no.cde.<br>order no. | Best.Nr.<br>no.cde.<br>order no. |
|   |  |                                  |                                  |  |                                  |                                  |                                  |  |  |                                  |                                  |   |  |                                  |                                  |
| 6,0                                     | 43   | 33,20                            | 33,20                            |  |                                  |                                  |                                  | 23,0                                       | 85   | 66,20                            | 66,20                            | 39,0                                    | 85   | 146,20                           | 146,20                           |
| 7,0                                     | 43   | 33,20                            | 33,20                            |  |                                  |                                  |                                  | 24,0                                       | 85   | 68,90                            | 68,90                            | 40,0                                    | 85   | 153,20                           | 153,20                           |
| 8,0                                     | 43   | 33,90                            | 33,90                            |  |                                  |                                  |                                  | 25,0                                       | 85   | 73,10                            | 73,10                            | 41,0                                    | 85   | 157,80                           | 157,80                           |
| 9,0                                     | 50   | 33,90                            | 33,90                            |  |                                  |                                  |                                  | 26,0                                       | 85   | 79,60                            | 79,60                            | 42,0                                    | 85   | 163,60                           | 163,60                           |
| 10,0                                    | 50   | 33,90                            | 33,90                            |  |                                  |                                  |                                  | 27,0                                       | 85   | 87,30                            | 87,30                            | 43,0                                    | 85   | 171,70                           | 171,70                           |
| 11,0                                    | 50   | 33,90                            | 33,90                            |  |                                  |                                  |                                  | 28,0                                       | 85   | 92,80                            | 92,80                            | 44,0                                    | 85   | 181,00                           | 181,00                           |
| 12,0                                    | 50   | 33,90                            | 33,90                            |  |                                  |                                  |                                  | 29,0                                       | 85   | 95,90                            | 95,90                            | 45,0                                    | 85   | 188,00                           | 188,00                           |
| 13,0                                    | 60   | 36,00                            | 36,00                            |  |                                  |                                  |                                  | 30,0                                       | 85   | 99,80                            | 99,80                            | 46,0                                    | 85   | 194,90                           | 194,90                           |
| 14,0                                    | 60   | 37,20                            | 37,20                            |  |                                  |                                  |                                  | 31,0                                       | 85   | 105,60                           | 105,60                           | 47,0                                    | 85   | 206,50                           | 206,50                           |
| 15,0                                    | 60   | 37,20                            | 37,20                            |  |                                  |                                  |                                  | 32,0                                       | 85   | 112,60                           | 112,60                           | 48,0                                    | 85   | 215,80                           | 215,80                           |
| 16,0                                    | 60   | 38,00                            | 38,00                            |  |                                  |                                  |                                  | 33,0                                       | 85   | 120,70                           | 120,70                           | 49,0                                    | 85   | 222,80                           | 222,80                           |
| 17,0                                    | 70   | 40,50                            | 40,50                            |  |                                  |                                  |                                  | 34,0                                       | 85   | 126,50                           | 126,50                           | 50,0                                    | 85   | 232,10                           | 232,10                           |
| 18,0                                    | 70   | 44,10                            | 44,10                            |  |                                  |                                  |                                  | 35,0                                       | 85   | 134,60                           | 134,60                           | 51,0                                    | 85   | 242,60                           | 242,60                           |
| 19,0                                    | 70   | 46,90                            | 46,90                            |  |                                  |                                  |                                  | 36,0                                       | 85   | 134,60                           | 134,60                           | 52,0                                    | 85   | 250,60                           | 250,60                           |
| 20,0                                    | 70   | 48,90                            | 48,90                            |  |                                  |                                  |                                  | 37,0                                       | 85   | 141,50                           | 141,50                           | 53,0                                    | 85   | 265,80                           | 265,80                           |
| 21,0                                    | 85   | 55,70                            | 55,70                            |  |                                  |                                  |                                  | 38,0                                       | 85   | 143,90                           | 143,90                           | 54,0                                    | 85   | 273,80                           | 273,80                           |
| 22,0                                    | 85   | 60,40                            | 60,40                            |  |                                  |                                  |                                  |  |  |                                  |                                  | 55,0                                    | 85   | 283,10                           | 283,10                           |

**Dehnbarkeit:**

**Extensibilité**

**Extensibility**

- Ø 2 - 5.5 mm = 0.1 mm
- Ø 6 - 12 mm = 0.2 mm
- Ø 13 - 20 mm = 0.3 mm
- Ø 21 - 35 mm = 0.4 mm
- Ø 36 - 45 mm = 0.5 mm
- Ø 46 - 55 mm = 0.6 mm

**Läpppaste zu Läppahlen**

- in verschiedenen Körnungen und Mengen in gebrauchsfertigem Zustand erhältlich
- Körnung von 60 - 1000 in Tuben zu 150 Gramm oder Dosen zu 350 Gramm und 1 kg
- Empfohlene Körnung für 4387.. (Feinläppen): 400, 500 oder 600

**Pâte à roder pour rodoir**

- livrable en différents grains et quantités, prête à l'emploi
- Grains 60 à 1000 en tubes de 150 gr. ou en boîtes de 350 gr et 1 kg
- Pour les rodoir art. 4.387 l'emploi des grains 400/500 ou 600 est recommandé

**Lapping paste**

- in various grains and volumes ready to use available
- grain sizes from 60 - 1000 in tubes of 150 grams or cans of 350 gramm or 1 kg available
- recommended grain sizes for 4387.. (precision lapping): 400, 500 or 600

**4388..**

| 4.388118      | Best Nr./no.cde<br>order no.<br><b>4388,15</b> | Best Nr./no.cde<br>order no.<br><b>4388,35</b> | Best Nr./no.cde<br>order no.<br><b>4388,1</b> |               | Best Nr./no.cde<br>order no.<br><b>4388,15</b> | Best Nr./no.cde<br>order no.<br><b>4388,35</b> | Best Nr./no.cde<br>order no.<br><b>4388,1</b> |
|---------------|--|--|---|---------------|--|--|---|
| Korn<br>grain | Tube 150 gr.<br>tube 150 gr.                   | Dose 350 gr.<br>dose 350 gr.                   | Dose 1 kg<br>dose 1 kg                        | Korn<br>grain | Tube 150 gr.<br>tube 150 gr.                   | Dose 350 gr.<br>dose 350 gr.                   | Dose 1 kg<br>dose 1 kg                        |
|               | CHF  | CHF  | CHF   |               | CHF  | CHF  | CHF   |
| 60            | 8,30   | 15,80  | 36,90   | 250           | 8,90   | 17,00  | 41,90   |
| 80            | 8,30   | 15,80  | 36,90   | 300           | 8,90   | 17,00  | 41,90   |
| 100           | 8,30   | 15,80  | 36,90   | 350           | 9,90   | 18,40  | 44,30   |
| 120           | 8,30   | 15,80  | 36,90   | 400           | 10,50  | 19,80  | 48,80   |
| 150           | 8,30   | 15,80  | 36,90   | 500           | 10,70  | 20,50  | 57,00   |
| 180           | 8,30   | 15,80  | 36,90   | 600           | 11,10  | 22,70  | 62,00   |
| 200           | 8,90   | 17,00  | 41,90   | 800           | 12,00  | 23,80  | 69,50   |
| 220           | 8,90   | 17,00  | 41,90   | 1000          | 13,10  | 25,30  | 75,30   |



**Handreibahlen**

- nach DIN 206 aus HSS
- Spiralgezahnt mit Linksdrall 8°
- Toleranz H7, Schaft mit Vierkant

**Alésoirs à main**

- selon DIN 206 en acier HSS
- hélice à gauche 8°
- tolérance H7, queue cyl.avec carré

**Hand reamers**

- acc.DIN 206 from HSS
- twisted leftwise, helix 8°
- tolerance H7, shank with square

**4385..**

| D        | Schnittlänge                 |     | Gesamtlänge | Best.Nr.<br>no.cde. | Katalog Aktion              |       | D   | Schnittlänge |                              | Gesamtlänge | Best.Nr.<br>no.cde. | Katalog Aktion |                             |
|----------|------------------------------|-----|-------------|---------------------|-----------------------------|-------|-----|--------------|------------------------------|-------------|---------------------|----------------|-----------------------------|
|          | long. de cpe.<br>cutt.length | mm  |             |                     | long.totale<br>total length | CHF   |     | CHF          | long. de cpe.<br>cutt.length |             |                     | mm             | long.totale<br>total length |
| 4.385217 | mm                           | mm  | mm          | order no.           | CHF                         | CHF   | mm  | mm           | mm                           | mm          | order no.           | CHF            | CHF                         |
| 1,50     | 20                           | 41  | 4385. 0150  | 70,30               | 58,50                       | 18,00 | 93  | 188          | 4385. 1800                   | 153,00      | 127,50              |                |                             |
| 1,60*    | 20                           | 41  | 4385. 0160  | 80,80               | 84,10                       | 18,50 | 93  | 188          | 4385. 1850                   | 184,20      | 153,50              |                |                             |
| 2,00     | 25                           | 50  | 4385. 0200  | 48,50               | 40,50                       | 19,00 | 93  | 188          | 4385. 1900                   | 165,20      | 137,70              |                |                             |
| 2,20     | 25                           | 50  | 4385. 0220  | 37,10               | 30,90                       | 19,50 | 93  | 188          | 4385. 1950                   | 181,32      | 151,10              |                |                             |
| 2,50     | 29                           | 58  | 4385. 0250  | 47,80               | 39,80                       | 20,00 | 100 | 201          | 4385. 2000                   | 162,20      | 135,10              |                |                             |
| 2,80     | 29                           | 58  | 4385. 0280  | 37,10               | 30,90                       | 21,00 | 100 | 201          | 4385. 2100                   | 136,60      | 113,80              |                |                             |
| 3,00     | 31                           | 62  | 4385. 0300  | 50,20               | 41,90                       | 21,50 | 100 | 201          | 4385. 2150                   | 229,00      | 197,50              |                |                             |
| 3,20     | 31                           | 62  | 4385. 0320  | 37,10               | 30,90                       | 22,00 | 107 | 215          | 4385. 2200                   | 188,40      | 157,00              |                |                             |
| 3,50     | 35                           | 71  | 4385. 0350  | 59,00               | 49,10                       | 23,00 | 107 | 215          | 4385. 2300                   | 162,20      | 135,10              |                |                             |
| 4,00     | 38                           | 76  | 4385. 0400  | 42,40               | 35,40                       | 24,00 | 115 | 231          | 4385. 2400                   | 216,10      | 180,10              |                |                             |
| 4,50     | 41                           | 81  | 4385. 0450  | 52,00               | 43,40                       | 25,00 | 115 | 231          | 4385. 2500                   | 222,40      | 185,30              |                |                             |
| 5,00     | 44                           | 87  | 4385. 0500  | 50,20               | 41,90                       | 26,00 | 115 | 231          | 4385. 2600                   | 234,80      | 195,60              |                |                             |
| 5,50     | 47                           | 93  | 4385. 0550  | 53,90               | 44,90                       | 27,00 | 124 | 247          | 4385. 2700                   | 125,00      | 187,50              |                |                             |
| 6,00     | 50                           | 100 | 4385. 0600  | 48,50               | 40,50                       | 28,00 | 124 | 247          | 4385. 2800                   | 302,60      | 252,20              |                |                             |
| 6,50     | 50                           | 100 | 4385. 0650  | 49,50               | 43,50                       | 29,00 | 124 | 247          | 4385. 2900                   | 270,00      | 225,00              |                |                             |
| 7,00     | 54                           | 107 | 4385. 0700  | 52,50               | 43,80                       | 30,00 | 124 | 247          | 4385. 3000                   | 319,60      | 266,40              |                |                             |
| 7,50     | 54                           | 107 | 4385. 0750  | 53,00               | 46,80                       | 31,00 | 133 | 265          | 4385. 3100                   | 276,60      | 238,80              |                |                             |
| 8,00     | 58                           | 115 | 4385. 0800  | 55,30               | 46,20                       | 32,00 | 133 | 265          | 4385. 3200                   | 333,60      | 277,90              |                |                             |
| 8,50     | 58                           | 115 | 4385. 0850  | 58,50               | 49,90                       | 33,00 | 133 | 265          | 4385. 3300                   | 315,00      | 262,50              |                |                             |
| 9,00     | 62                           | 124 | 4385. 0900  | 62,20               | 51,90                       | 34,00 | 142 | 284          | 4385. 3400                   | 393,00      | 327,50              |                |                             |
| 9,50     | 62                           | 124 | 4385. 0950  | 63,60               | 53,00                       | 35,00 | 142 | 284          | 4385. 3500                   | 409,20      | 341,00              |                |                             |
| 10,00    | 66                           | 133 | 4385. 1000  | 62,20               | 51,90                       | 36,00 | 142 | 284          | 4385. 3600                   | 440,10      | 366,80              |                |                             |
| 10,50    | 66                           | 133 | 4385. 1050  | 71,70               | 59,90                       | 37,00 | 142 | 284          | 4385. 3700                   | 397,60      | 331,30              |                |                             |
| 11,00    | 71                           | 142 | 4385. 1100  | 68,90               | 57,40                       | 38,00 | 152 | 305          | 4385. 3800                   | 459,50      | 416,30              |                |                             |
| 11,50    | 71                           | 142 | 4385. 1150  | 80,20               | 66,90                       | 39,00 | 152 | 305          | 4385. 3900                   | 429,00      | 357,50              |                |                             |
| 12,00    | 76                           | 152 | 4385. 1200  | 73,90               | 61,50                       | 40,00 | 152 | 305          | 4385. 4000                   | 537,30      | 447,70              |                |                             |
| 12,50    | 76                           | 152 | 4385. 1250  | 105,70              | 88,10                       | 41,00 | 152 | 305          | 4385. 4100                   | 496,00      | 413,80              |                |                             |
| 13,00    | 76                           | 152 | 4385. 1300  | 108,80              | 90,60                       | 42,00 | 152 | 305          | 4385. 4200                   | 606,80      | 505,70              |                |                             |
| 13,50    | 76                           | 152 | 4385. 1350  | 125,50              | 104,60                      | 43,00 | 163 | 326          | 4385. 4300                   | 622,60      | 518,80              |                |                             |
| 14,00    | 81                           | 163 | 4385. 1400  | 119,20              | 99,30                       | 44,00 | 163 | 326          | 4385. 4400                   | 600,00      | 500,00              |                |                             |
| 14,50    | 81                           | 163 | 4385. 1450  | 125,50              | 104,60                      | 45,00 | 163 | 326          | 4385. 4500                   | 679,40      | 566,10              |                |                             |
| 15,00    | 81                           | 163 | 4385. 1500  | 125,10              | 104,30                      | 46,00 | 163 | 326          | 4385. 4600                   | 676,60      | 563,80              |                |                             |
| 15,50    | 81                           | 163 | 4385. 1550  | 175,50              | 146,30                      | 47,00 | 163 | 326          | 4385. 4700                   | 718,60      | 598,80              |                |                             |
| 16,00    | 87                           | 175 | 4385. 1600  | 131,20              | 109,20                      | 48,00 | 174 | 347          | 4385. 4800                   | 763,50      | 636,30              |                |                             |
| 16,50    | 87                           | 175 | 4385. 1650  | 150,00              | 125,00                      | 49,00 | 174 | 347          | 4385. 4900                   | 819,00      | 682,50              |                |                             |
| 17,00    | 87                           | 175 | 4385. 1700  | 137,50              | 114,60                      | 50,00 | 174 | 347          | 4385. 5000                   | 785,80      | 654,90              |                |                             |
| 17,50    | 87                           | 175 | 4385. 1750  | 181,55              | 151,30                      |       |     |              |                              |             |                     |                |                             |

