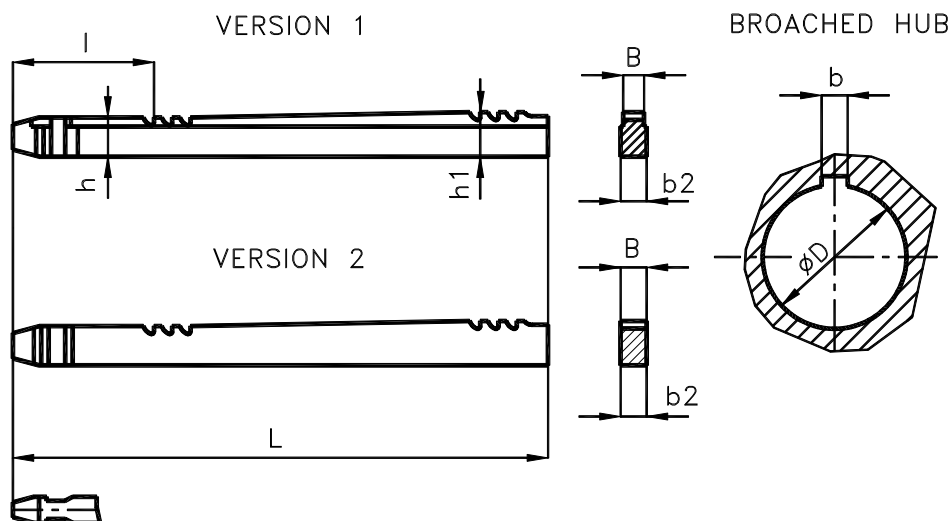


**FLAT PULL BROACHES**
**ČSN 22 1812**

For Long Spring Keyseats



The broaches made of high-speed steel (HSS) or extra high-speed steel (HSSE) are available. The pull broaches are delivered with the respective rests (ČSN 22 1891) and/or with guiding inserts – catalogue No21895. In a standard version, broaches with chuck arbor according to ČSN 22 0480, are available. For  $b = 3 \div 6$  broaches of version 1 while for  $b = 8 \div 20$  broaches of version 2 are being produced. In a special version, broaches with chuck arbor at the option of the customer and/or with rear or tools with other tolerance of flute width also broaches for other dimensions of the hub profile  $b$ ,  $\phi D$ ,  $l_p$ , are available.

| b P9 | Hub              |                | $l_p$          | Pull broach |         |       |      |     |       |   | x | y    | G |
|------|------------------|----------------|----------------|-------------|---------|-------|------|-----|-------|---|---|------|---|
|      | $\phi D$<br>over | $\phi D$<br>to |                | B           | $b2 f7$ | h     | $h1$ | l   | L     |   |   |      |   |
| 3    | 8                | 10             | $15 \div 30$   | 3           | 4       | 5.17  | 6.25 | 210 | 530   | 2 | 1 | 0.08 |   |
| 4    | 10               | 12             | $18 \div 45$   | 4           | 5       | 6.27  | 7.52 | 235 | 650   |   |   | 0.16 |   |
| 5    | 12               | 17             | $25 \div 60$   | 5           | 6       | 10.05 | 11.5 | 245 | 670   |   |   | 0.33 |   |
| 6    | 17               | 22             | $35 \div 80$   | 6           | 7       | 12.3  | 14   | 270 | 775   |   |   | 0.46 |   |
| 8    | 22               | 30             | $45 \div 115$  | 8           | 8       | 14.66 | 16   | 302 | 815   | 3 | 2 | 0.77 |   |
| 10   | 30               | 38             | $60 \div 140$  | 10          | 10      | 21.44 | 23   | 325 | 890   |   |   | 1.52 |   |
| 12   | 38               | 44             | $70 \div 163$  | 12          | 12      | 25.45 | 27   | 350 | 925   | 4 | 3 | 2.26 |   |
| 14   | 44               | 50             | $80 \div 185$  | 14          | 14      | 29.67 | 31   | 370 | 955   |   |   | 3.26 |   |
| 16   | 50               | 58             | $90 \div 205$  | 16          | 16      | 31.55 | 33   | 390 | 1 055 |   |   | 4.36 |   |
| 18   | 58               | 65             | $100 \div 220$ | 18          | 18      | 36.75 | 38   | 405 | 995   | 5 | 4 | 5.59 |   |
| 20   | 65               | 75             | $120 \div 240$ | 20          | 20      | 40.86 | 42   | 425 | 1 035 | 6 | 5 | 7.11 |   |

Dimensions in mm.

**Legend:**

$l_p$  ... broaching length  
 B ... width of tool which broaches the flute b P9 in the hub  
 x ... number of pulls  
 y ... number of required rests  
 G ... weight [kg]