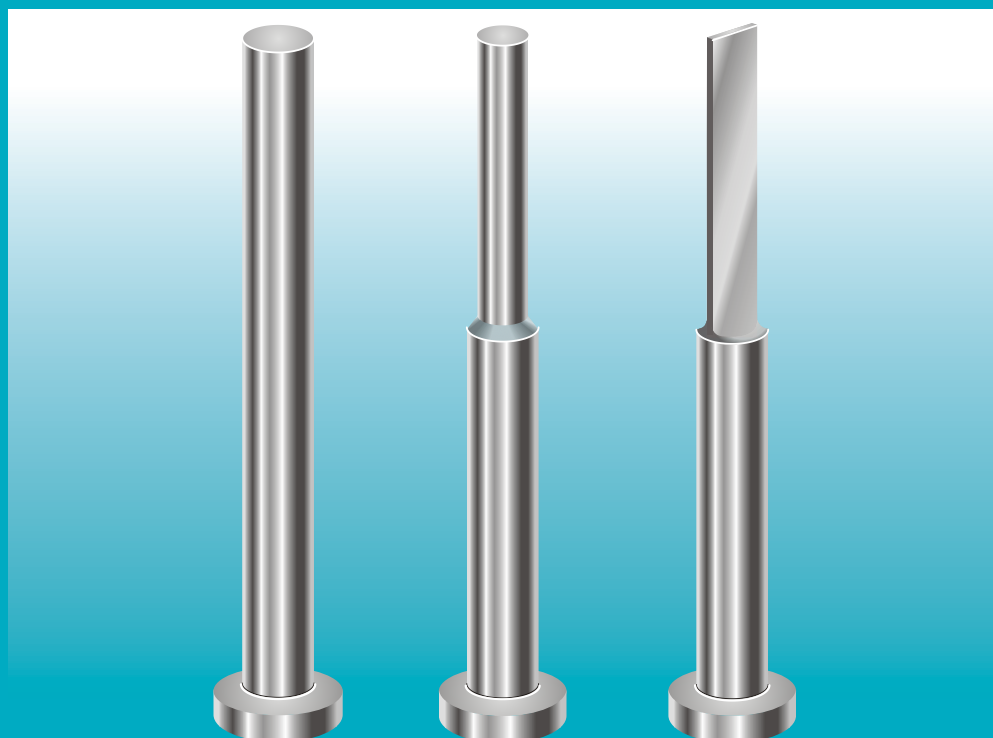





















# CZĘŚCI ZNORMALIZOWANE DO FORM

STANDARD ELEMENTS FOR MOLDS



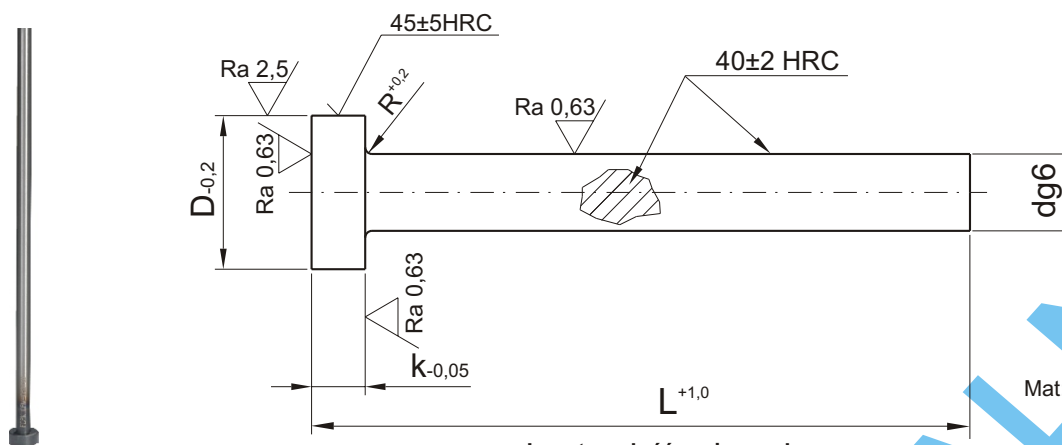
**CZĘŚCI ZNORMALIZOWANE DO FORM**  
**STANDARD ELEMENTS FOR MOLDS**

|   | NAZWA KATALOGOWA                 | CATALOG NAME                    | SYMBOL | STR./PG |
|---|----------------------------------|---------------------------------|--------|---------|
|    | Rdzeń formujący                  | Core pins                       | CPM    | B.3     |
|    | Wypychacz hartowany              | Ejector pins hardened           | WH-    | B.4-5   |
|    | Wypychacz azotowany              | Ejector pins nitrided           | EM-    | B.6-7   |
|    | Wypychacz tulejowy hartowany     | Ejector sleeves hardened        | WHT-   | B.8-9   |
|    | Wypychacz tulejowy azotowany     | Ejector sleeves nitrided        | EMT-   | B.10    |
|    | Wypychacz odsadzany azotowany    | Step pins nitrided              | ESM-   | B.11    |
|   | Wypychacz odsadzany hartowany    | Step pins hardened              | OH-    | B.11    |
|  | Wypychacz płaski hartowany       | Flat ejector pins hardened      | OHP-   | B.12    |
|  | Wypychacz płaski azotowany       | Flat ejector pins nitrided      | ESP-   | B.13    |
|  | Słup prowadzący                  | Leader pins                     | SLE-   | B.14-16 |
|  | Słup prowadzący                  | Leader pins                     | SXE-   | B.17-19 |
|  | Tuleja prowadząca                | Leader pin bushings             | TPE-   | B.20    |
|  | Tuleja prowadząca                | Leader pin bushings             | TXE-   | B.21    |
|  | Tuleja prowadząca - bronze rite™ | Guide bushings - bronze rite™   | TPB-   | B.22    |
|  | Tuleja prowadząca - bronze rite™ | Guide bushings - bronze rite™   | TXB-   | B.23    |
|  | Tuleja prowadząca samosmarująca  | Self-lubricating guide bushings | TPG-   | B.24    |
|  | Tuleja prowadząca samosmarująca  | Self-lubricating guide bushings | TXG-   | B.25    |
|  | Tuleja ustalająca                | Locating sleeves                | TUE-   | B.26    |
|  | Nóżka                            | Feet                            | NF     | B.26    |

**CZĘŚCI ZNORMALIZOWANE DO FORM**  
**STANDARD ELEMENTS FOR MOLDS**

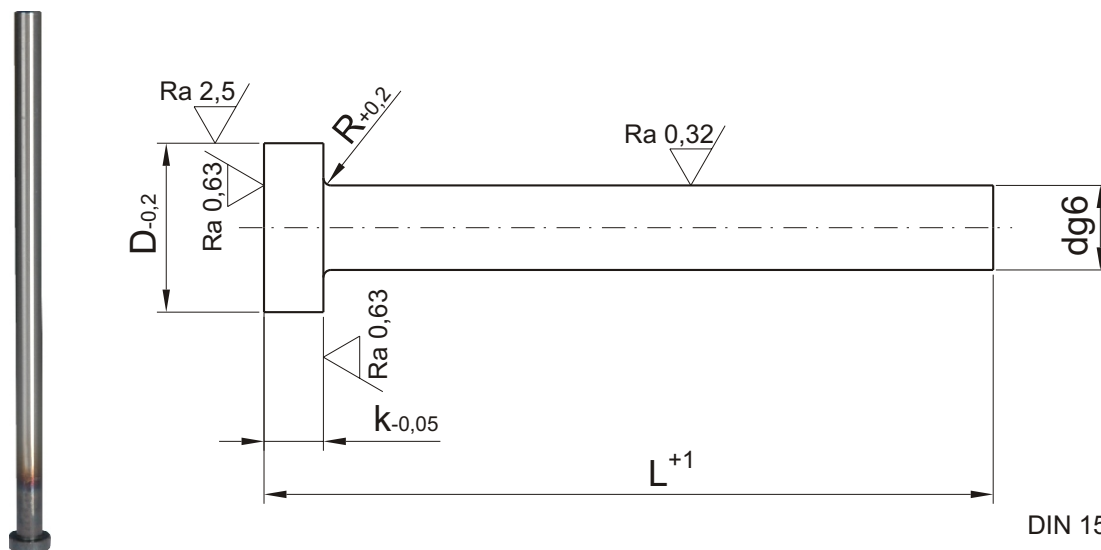
|   | NAZWA KATALOGOWA                   | CATALOG NAME                    | SYMBOL     | STR./PG |
|---|------------------------------------|---------------------------------|------------|---------|
|    | Słup skośny                        | Angle pins                      | SS-        | B.27    |
|   | Prowadzenie płyty wypychaczy       | Ejection system                 |            | B.28    |
|    | Słup prowadzący                    | Leader pins                     | SPW-       | B.28    |
|    | Słup prowadzący                    | Leader pins                     | KPE-       | B.28    |
|    | Tuleja prowadząca - bronze rite TM | Guide bushings - bronze rite TM | TBW-       | B.29    |
|    | Tuleja prowadząca samosmarująca    | Self-lubricating guide bushings | TGW-       | B.29    |
|   | Koszyk kulkowy                     | Ball bearing cages              | KKW-       | B.30    |
|  | Tuleja do koszyka kulkowego        | Bushings                        | TKW-       | B.30    |
|  | Tuleja z rotacyjnym syst. kulkowym | Recirculating ball bushing      | DKA-       | B.31    |
|  | Płytki samosmarujące               | Wear plates self-lubricating    | PFA-, PFB- | B.32    |
|  | Podkładka oporowa                  | Support washer                  | PO-        | B.33    |
|  | Podkładka oporowa                  | Support washer                  | POA-       | B.33    |
|  | Sworzeń płyty wypychaczy           | Ejector rod                     | KWH-       | B.34    |
|  | Tuleja prowadząca                  | Tube dowel                      | TPZ        | B.35    |
|  | Tulejowy zabierak wlewka           | Sprue pullers bushings          | TZW-       | B.36    |
|  | Tuleja wtryskowa                   | Sprue bushings                  | TWA- TWB-  | B.37    |
|  | Tuleja wtryskowa                   | Sprue bushings                  | TWC- TWD-  | B.38    |
|  | Pierścień centrujący               | Locating rings                  | PCA-       | B.39    |
|  | Pierścień centrujący               | Locating rings                  | PCB-, PCC- | B.40    |

CPM



Mat: Stal narzędziowa do  
pracy na gorąco  
Hot working tool steel  
500+550°C

| NR KAT. |            |            |            |            |            |            |            |            |            |            |            |             |             |             |             |
|---------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|-------------|-------------|-------------|-------------|
| d       | D          | k          | R          | L          |            |            |            |            |            |            |            |             |             |             |             |
|         |            |            |            | 100        | 125        | 160        | 200        | 250        | 315        | 400        | 500        | 630         | 800         | 1000        |             |
| 1       | 2,5        | 1,2        | 0,2        | CPM-010100 |            | CPM-010160 |            |            |            |            |            |             |             |             |             |
| 1,5     | 3          | 1,5        |            | CPM-015100 | CPM-015125 | CPM-015160 | CPM-015200 |            |            |            |            |             |             |             |             |
| 2       | 4          | 2          |            | CPM-020100 | CPM-020125 | CPM-020160 | CPM-020200 | CPM-020250 |            |            |            |             |             |             |             |
| 2,2     |            |            |            | CPM-022100 | CPM-022125 | CPM-022160 | CPM-022200 | CPM-022250 |            |            |            |             |             |             |             |
| 2,5     | 5          | CPM-025100 |            | CPM-025125 | CPM-025160 | CPM-025200 | CPM-025250 |            |            |            |            |             |             |             |             |
| 2,7     |            | CPM-027100 |            | CPM-027125 | CPM-027160 | CPM-027200 | CPM-027250 |            |            |            |            |             |             |             |             |
| 3       | 6          | 0,3        | CPM-030100 | CPM-030125 | CPM-030160 | CPM-030200 | CPM-030250 | CPM-030315 | CPM-030400 | CPM-030500 |            |             |             |             |             |
| 3,2     |            |            | CPM-032100 | CPM-032125 | CPM-032160 | CPM-032200 | CPM-032250 | CPM-032315 | CPM-032400 |            |            |             |             |             |             |
| 3,5     | 7          |            | CPM-035100 | CPM-035125 | CPM-035160 | CPM-035200 | CPM-035250 | CPM-035315 | CPM-035400 |            |            |             |             |             |             |
| 3,7     |            |            | CPM-037100 | CPM-037125 | CPM-037160 | CPM-037200 | CPM-037250 | CPM-037315 | CPM-037400 |            |            |             |             |             |             |
| 4       | 8          |            | CPM-040100 | CPM-040125 | CPM-040160 | CPM-040200 | CPM-040250 | CPM-040315 | CPM-040400 | CPM-040500 |            |             |             |             |             |
| 4,2     |            |            | CPM-042100 | CPM-042125 | CPM-042160 | CPM-042200 | CPM-042250 | CPM-042315 | CPM-042400 | CPM-042500 | CPM-042630 |             |             |             |             |
| 4,5     |            |            | CPM-045100 | CPM-045125 | CPM-045160 | CPM-045200 | CPM-045250 | CPM-045315 | CPM-045400 |            |            |             |             |             |             |
| 5       | 10         |            | CPM-050100 | CPM-050125 | CPM-050160 | CPM-050200 | CPM-050250 | CPM-050315 | CPM-050400 | CPM-050500 | CPM-050630 | CPM-050800  |             |             |             |
| 5,2     |            |            | CPM-052100 | CPM-052125 | CPM-052160 | CPM-052200 | CPM-052250 | CPM-052315 | CPM-052400 | CPM-052500 | CPM-052630 |             |             |             |             |
| 5,5     |            |            | CPM-055100 | CPM-055125 | CPM-055160 | CPM-055200 | CPM-055250 | CPM-055315 | CPM-055400 | CPM-055500 | CPM-055630 |             |             |             |             |
| 6       | 12         |            | 5          | 0,5        | CPM-060100 | CPM-060125 | CPM-060160 | CPM-060200 | CPM-060250 | CPM-060315 | CPM-060400 | CPM-060500  | CPM-060630  | CPM-060800  | CPM-0601000 |
| 6,2     |            |            |            |            | CPM-062100 | CPM-062125 | CPM-062160 | CPM-062200 | CPM-062250 | CPM-062315 | CPM-062400 | CPM-062500  | CPM-062630  |             |             |
| 6,5     |            |            |            |            | CPM-065100 | CPM-065125 | CPM-065160 | CPM-065200 | CPM-065250 | CPM-065315 | CPM-065400 | CPM-065500  |             |             |             |
| 7       |            |            |            |            | CPM-070100 | CPM-070125 | CPM-070160 | CPM-070200 | CPM-070250 | CPM-070315 | CPM-070400 | CPM-070500  | CPM-070630  |             |             |
| 7,5     |            |            |            |            | CPM-075100 | CPM-075125 | CPM-075160 | CPM-075200 | CPM-075250 | CPM-075315 | CPM-075400 | CPM-075500  |             |             |             |
| 8       |            | CPM-080100 |            |            | CPM-080125 | CPM-080160 | CPM-080200 | CPM-080250 | CPM-080315 | CPM-080400 | CPM-080500 | CPM-080630  | CPM-080800  | CPM-0801000 |             |
| 8,2     |            | CPM-082100 |            |            | CPM-082125 | CPM-082160 | CPM-082200 | CPM-082250 | CPM-082315 | CPM-082400 | CPM-082500 | CPM-082630  | CPM-082800  |             |             |
| 8,5     |            | 14         |            |            | CPM-085100 | CPM-085125 | CPM-085160 | CPM-085200 | CPM-085250 | CPM-085315 | CPM-085400 | CPM-085500  | CPM-085630  |             |             |
| 9       |            | 16         |            |            | CPM-090100 | CPM-090125 | CPM-090160 | CPM-090200 | CPM-090250 | CPM-090315 | CPM-090400 | CPM-090500  | CPM-090630  |             |             |
| 9,5     |            |            |            |            | CPM-095100 | CPM-095125 | CPM-095160 | CPM-095200 | CPM-095250 | CPM-095315 | CPM-095400 | CPM-095500  |             |             |             |
| 10      | CPM-100100 |            | CPM-100125 | CPM-100160 | CPM-100200 | CPM-100250 | CPM-100315 | CPM-100400 | CPM-100500 | CPM-100630 | CPM-100800 | CPM-1001000 |             |             |             |
| 10,2    | CPM-102100 |            | CPM-102125 | CPM-102160 | CPM-102200 | CPM-102250 | CPM-102315 | CPM-102400 | CPM-102500 | CPM-102630 | CPM-102800 |             |             |             |             |
| 10,5    | CPM-105100 |            | CPM-105125 | CPM-105160 | CPM-105200 | CPM-105250 | CPM-105315 | CPM-105400 | CPM-105500 | CPM-105630 |            |             |             |             |             |
| 11      | 18         | 7          | 0,8        | CPM-110100 | CPM-110125 | CPM-110160 | CPM-110200 | CPM-110250 | CPM-110315 | CPM-110400 | CPM-110500 | CPM-110630  |             |             |             |
| 12      |            |            |            | CPM-120100 | CPM-120125 | CPM-120160 | CPM-120200 | CPM-120250 | CPM-120315 | CPM-120400 | CPM-120500 | CPM-120630  | CPM-120800  | CPM-1201000 |             |
| 12,2    |            |            |            | CPM-122100 | CPM-122125 | CPM-122160 | CPM-122200 | CPM-122250 | CPM-122315 | CPM-122400 | CPM-122500 | CPM-122630  | CPM-122800  |             |             |
| 12,5    |            |            |            | CPM-125100 | CPM-125125 | CPM-125160 | CPM-125200 | CPM-125250 | CPM-125315 | CPM-125400 | CPM-125500 | CPM-125630  | CPM-125800  |             |             |
| 14      |            |            |            | 22         | CPM-140100 | CPM-140125 | CPM-140160 | CPM-140200 | CPM-140250 | CPM-140315 | CPM-140400 | CPM-140500  | CPM-140630  | CPM-140800  | CPM-1401000 |
| 16      |            |            |            | CPM-160100 | CPM-160125 | CPM-160160 | CPM-160200 | CPM-160250 | CPM-160315 | CPM-160400 | CPM-160500 | CPM-160630  | CPM-160800  | CPM-1601000 |             |
| 18      | 24         |            | CPM-180100 | CPM-180125 | CPM-180160 | CPM-180200 | CPM-180250 | CPM-180315 | CPM-180400 | CPM-180500 | CPM-180630 | CPM-180800  | CPM-1801000 |             |             |
| 20      | 26         | 8          | 1          | CPM-200100 | CPM-200125 | CPM-200160 | CPM-200200 | CPM-200250 | CPM-200315 | CPM-200400 | CPM-200500 | CPM-200630  | CPM-200800  | CPM-2001000 |             |
| 25      | 32         | 10         |            |            |            | CPM-250160 | CPM-250200 | CPM-250250 | CPM-250315 | CPM-250400 | CPM-250500 | CPM-250630  | CPM-250800  | CPM-2501000 |             |
| 32      | 40         |            |            |            |            | CPM-320160 | CPM-320200 | CPM-320250 | CPM-320315 | CPM-320400 | CPM-320500 | CPM-320630  | CPM-320800  | CPM-3201000 |             |

**WH**


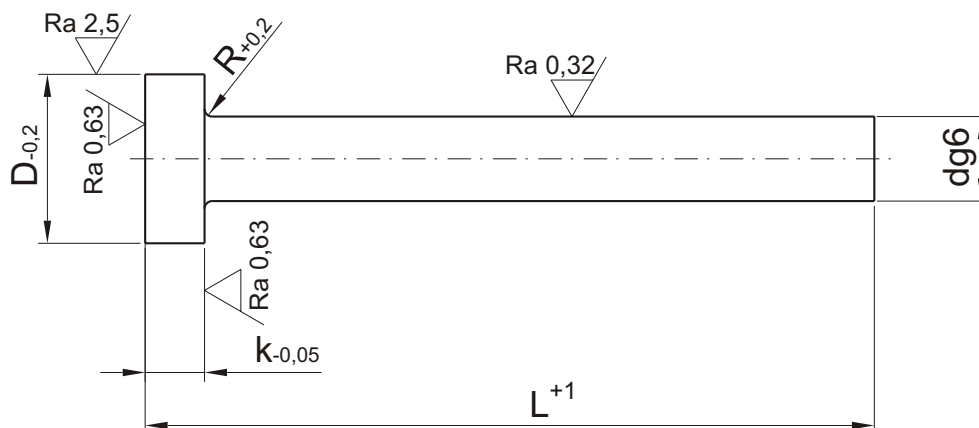
DIN 1530/ISO 6751

Trzon/Shaft: 60±2HRC  
Główka/Head: 45±5HRC

Mat: Stal narzędziowa  
Tool steel  
250°C

| d   | D  | k   | R   | NR KAT.   |           |           |           |           |           |           |           |
|-----|----|-----|-----|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
|     |    |     |     | L         |           |           |           |           |           |           |           |
|     |    |     |     | 80        | 100       | 125       | 160       | 200       | 250       | 315       | 400       |
| 1,5 | 3  | 1,5 | 0,2 | WH-015080 | WH-015100 | WH-015125 | WH-015160 | WH-015200 |           |           |           |
| 1,6 |    |     |     | WH-016080 | WH-016100 | WH-016125 | WH-016160 | WH-016200 |           |           |           |
| 1,7 |    |     |     |           | WH-017100 | WH-017125 | WH-017160 | WH-017200 |           |           |           |
| 1,8 |    |     |     |           | WH-018100 | WH-018125 | WH-018160 | WH-018200 |           |           |           |
| 2   | 4  | 2   | 0,2 | WH-020080 | WH-020100 | WH-020125 | WH-020160 | WH-020200 | WH-020250 |           |           |
| 2,1 |    |     |     |           |           |           | WH-021160 |           |           |           |           |
| 2,2 |    |     |     | WH-022080 | WH-022100 | WH-022125 | WH-022160 | WH-022200 | WH-022250 |           |           |
| 2,5 | 5  |     |     | WH-025080 | WH-025100 | WH-025125 | WH-025160 | WH-025200 | WH-025250 |           |           |
| 2,7 |    |     |     | WH-027080 | WH-027100 | WH-027125 | WH-027160 | WH-027200 | WH-027250 |           |           |
| 3   | 6  |     |     | WH-030080 | WH-030100 | WH-030125 | WH-030160 | WH-030200 | WH-030250 | WH-030315 |           |
| 3,1 |    |     |     |           |           |           | WH-031160 |           |           |           |           |
| 3,2 |    |     |     | WH-032080 | WH-032100 | WH-032125 | WH-032160 | WH-032200 | WH-032250 | WH-032315 |           |
| 3,5 |    |     |     | WH-035080 | WH-035100 | WH-035125 | WH-035160 | WH-035200 | WH-035250 | WH-035315 |           |
| 3,7 | 7  |     |     | WH-037080 | WH-037100 | WH-037125 | WH-037160 | WH-037200 | WH-037250 | WH-037315 |           |
| 4   |    |     |     | WH-040080 | WH-040100 | WH-040125 | WH-040160 | WH-040200 | WH-040250 | WH-040315 | WH-040400 |
| 4,1 | 8  |     |     |           |           |           | WH-041160 |           |           |           |           |
| 4,2 |    |     |     | WH-042080 | WH-042100 | WH-042125 | WH-042160 | WH-042200 | WH-042250 | WH-042315 | WH-042400 |
| 4,5 |    |     |     | WH-045080 | WH-045100 | WH-045125 | WH-045160 | WH-045200 | WH-045250 | WH-045315 | WH-045400 |
| 4,7 |    |     |     | WH-047080 | WH-047100 | WH-047125 | WH-047160 | WH-047200 | WH-047250 | WH-047315 | WH-047400 |
| 5   | 10 |     |     | WH-050080 | WH-050100 | WH-050125 | WH-050160 | WH-050200 | WH-050250 | WH-050315 | WH-050400 |
| 5,1 |    |     |     |           |           |           |           | WH-051200 |           |           |           |
| 5,2 |    |     |     | WH-052080 | WH-052100 | WH-052125 | WH-052160 | WH-052200 | WH-052250 | WH-052315 | WH-052400 |
| 5,5 |    |     |     |           | WH-055100 | WH-055125 | WH-055160 | WH-055200 | WH-055250 | WH-055315 | WH-055400 |
| 6   | 12 | 5   | 0,5 | WH-060080 | WH-060100 | WH-060125 | WH-060160 | WH-060200 | WH-060250 | WH-060315 | WH-060400 |

Uwaga. Inne wymiary na zapytanie  
Note. Other dimensions on request.

**WH**


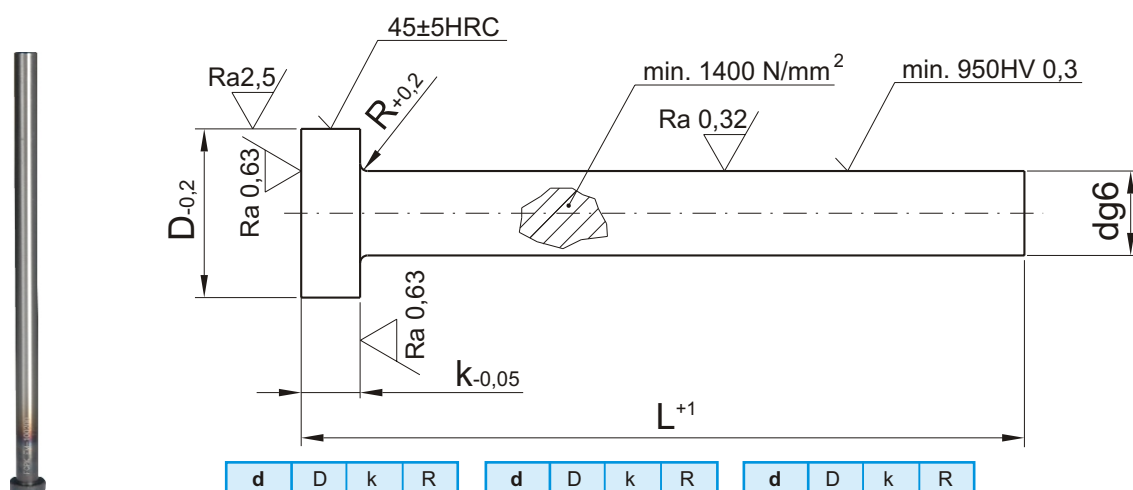
DIN 1530/ISO 6751

Trzon/Shaft: 60±2HRC  
Główka/Head: 45±5HRC

Mat: Stal narzędziowa  
Tool steel  
250°C

| d    | D  | k | R   | NR KAT.   |           |           |           |           |           |           |           |           |           |           |
|------|----|---|-----|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
|      |    |   |     |           |           |           |           | L         |           |           |           |           |           |           |
|      |    |   |     | 80        | 100       | 125       | 160       | 200       | 250       | 315       | 400       | 500       |           |           |
| 6,1  | 12 | 5 | 0,5 |           |           |           |           | WH-061200 |           |           |           |           |           |           |
| 6,2  |    |   |     | WH-062080 | WH-062100 | WH-062125 | WH-062160 | WH-062200 | WH-062250 | WH-062315 | WH-062400 |           |           |           |
| 6,5  |    |   |     |           | WH-065100 | WH-065125 | WH-065160 | WH-065200 | WH-065250 | WH-065315 | WH-065400 |           |           |           |
| 7    |    |   |     |           | WH-070100 | WH-070125 | WH-070160 | WH-070200 | WH-070250 | WH-070315 | WH-070400 |           |           |           |
| 8    | 14 |   |     | WH-080080 | WH-080100 | WH-080125 | WH-080160 | WH-080200 | WH-080250 | WH-080315 | WH-080400 |           |           |           |
| 8,1  |    |   |     |           |           |           |           | WH-081200 |           |           |           |           |           |           |
| 8,2  |    |   |     | WH-082080 | WH-082100 | WH-082125 | WH-082160 | WH-082200 | WH-082250 | WH-082315 | WH-082400 |           |           |           |
| 8,5  |    |   |     |           | WH-085100 | WH-085125 | WH-085160 | WH-085200 | WH-085250 | WH-085315 | WH-085400 |           |           |           |
| 9    |    |   |     | WH-090100 | WH-090125 | WH-090160 | WH-090200 | WH-090250 | WH-090315 | WH-090400 |           |           |           |           |
| 10   | 16 |   |     | WH-100080 | WH-100100 | WH-100125 | WH-100160 | WH-100200 | WH-100250 | WH-100315 | WH-100400 |           |           |           |
| 10,1 |    |   |     |           |           |           |           | WH-101200 |           |           |           |           |           |           |
| 10,2 |    |   |     | WH-102080 | WH-102100 | WH-102125 | WH-102160 | WH-102200 | WH-102250 | WH-102315 | WH-102400 |           |           |           |
| 10,5 |    |   |     |           | WH-105100 | WH-105125 | WH-105160 | WH-105200 | WH-105250 | WH-105315 | WH-105400 |           |           |           |
| 11   |    |   |     | WH-110100 | WH-110125 | WH-110160 | WH-110200 | WH-110250 | WH-110315 | WH-110400 |           |           |           |           |
| 12   | 18 |   |     | 7         | 0,8       | WH-120080 | WH-120100 | WH-120125 | WH-120160 | WH-120200 | WH-120250 | WH-120315 | WH-120400 | WH-120500 |
| 12,1 |    |   |     |           |           |           |           |           |           | WH-121200 |           |           |           |           |
| 12,2 |    |   |     |           |           |           | WH-122100 | WH-122125 | WH-122160 | WH-122200 | WH-122250 | WH-122315 | WH-122400 | WH-122500 |
| 12,5 |    |   |     |           |           |           | WH-125100 | WH-125125 | WH-125160 | WH-125200 | WH-125250 | WH-125315 | WH-125400 | WH-125500 |
| 14   | 22 |   |     |           |           | WH-140080 | WH-140100 | WH-140125 | WH-140160 | WH-140200 | WH-140250 | WH-140315 | WH-140400 | WH-140500 |
| 16   |    |   |     |           |           | WH-160080 | WH-160100 | WH-160125 | WH-160160 | WH-160200 | WH-160250 | WH-160315 | WH-160400 | WH-160500 |
| 18   | 24 |   |     |           |           |           | WH-180100 | WH-180125 | WH-180160 | WH-180200 | WH-180250 | WH-180315 | WH-180400 | WH-180500 |
| 20   | 26 | 8 | 1   |           |           |           | WH-200100 | WH-200125 | WH-200160 | WH-200200 | WH-200250 | WH-200315 | WH-200400 | WH-200500 |

Uwaga. Inne wymiary na zapytanie  
Note. Other dimensions on request.


**EM**

| d   | D   | k   | R   |
|-----|-----|-----|-----|
| 1   | 2,5 | 1,2 | 0,2 |
| 1,2 |     |     |     |
| 1,5 |     |     |     |
| 1,6 | 3   | 1,5 |     |
| 1,7 |     |     |     |
| 2   | 4   | 2   | 0,3 |
| 2,2 |     |     |     |
| 2,5 |     |     |     |
| 2,7 | 5   |     |     |

| d   | D | k | R   |
|-----|---|---|-----|
| 3   | 6 | 3 | 0,3 |
| 3,1 |   |   |     |
| 3,2 |   |   |     |
| 3,5 | 7 |   |     |
| 3,7 |   |   |     |
| 4   | 8 |   |     |
| 4,1 |   |   |     |
| 4,2 |   |   |     |
| 4,5 |   |   |     |

| d   | D  | k | R   |
|-----|----|---|-----|
| 5   | 10 | 3 | 0,3 |
| 5,1 |    |   |     |
| 5,2 |    |   |     |
| 5,5 | 12 | 5 | 0,5 |
| 6   |    |   |     |
| 6,1 |    |   |     |
| 6,2 |    |   |     |
| 6,5 |    |   |     |
| 7   |    |   |     |

DIN 1530/ISO 6751

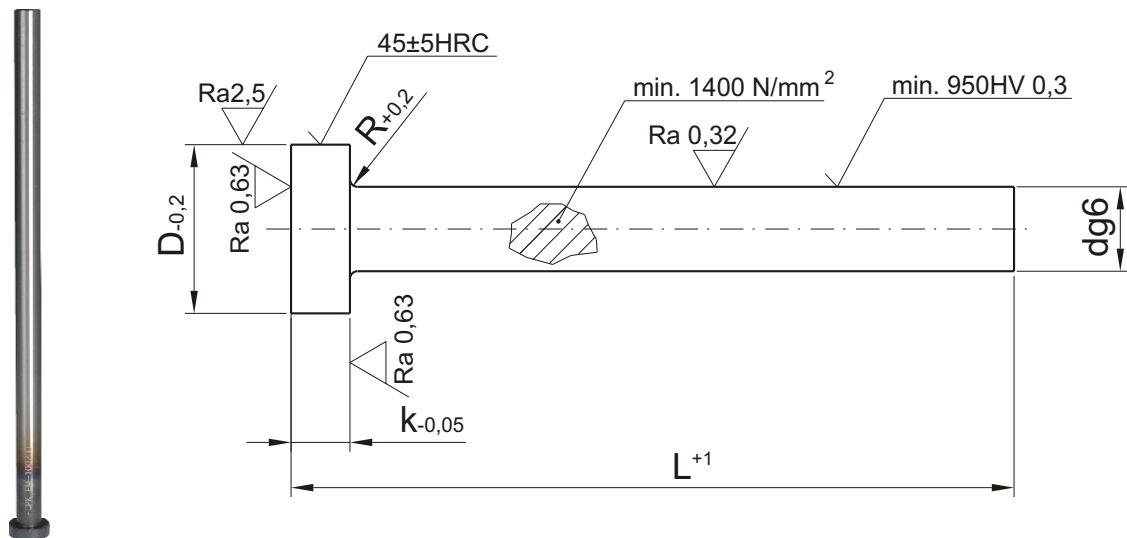
Azotowany  
Nitrided

Mat: Stal narzędziowa do  
pracy na gorąco  
Hot working tool steel  
500÷550°C

NR KAT.

| d   | L         |           |           |           |           |           |           |           |           |           |            |
|-----|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|------------|
|     | 100       | 125       | 160       | 200       | 250       | 315       | 400       | 500       | 630       | 800       | 1000       |
| 1   | EM-010100 |           | EM-010160 |           |           |           |           |           |           |           |            |
| 1,2 | EM-012100 |           | EM-012160 |           |           |           |           |           |           |           |            |
| 1,5 | EM-015100 | EM-015125 | EM-015160 | EM-015200 |           |           |           |           |           |           |            |
| 1,6 |           |           | EM-016160 |           |           |           |           |           |           |           |            |
| 1,7 | EM-017100 |           |           | EM-017200 |           |           |           |           |           |           |            |
| 2   | EM-020100 | EM-020125 | EM-020160 | EM-020200 | EM-020250 | EM-020315 |           |           |           |           |            |
| 2,2 | EM-022100 | EM-022125 | EM-022160 | EM-022200 | EM-022250 | EM-022315 |           |           |           |           |            |
| 2,5 | EM-025100 | EM-025125 | EM-025160 | EM-025200 | EM-025250 | EM-025315 |           |           |           |           |            |
| 2,7 | EM-027100 | EM-027125 | EM-027160 | EM-027200 | EM-027250 | EM-027315 |           |           |           |           |            |
| 3   | EM-030100 | EM-030125 | EM-030160 | EM-030200 | EM-030250 | EM-030315 | EM-030400 | EM-030500 |           |           |            |
| 3,1 |           |           | EM-031160 |           | EM-031250 |           |           |           |           |           |            |
| 3,2 | EM-032100 | EM-032125 | EM-032160 | EM-032200 | EM-032250 | EM-032315 | EM-032400 |           |           |           |            |
| 3,5 | EM-035100 | EM-035125 | EM-035160 | EM-035200 | EM-035250 | EM-035315 | EM-035400 |           |           |           |            |
| 3,7 | EM-037100 | EM-037125 | EM-037160 | EM-037200 | EM-037250 | EM-037315 | EM-037400 |           |           |           |            |
| 4   | EM-040100 | EM-040125 | EM-040160 | EM-040200 | EM-040250 | EM-040315 | EM-040400 | EM-040500 |           |           |            |
| 4,1 |           |           |           |           | EM-041250 |           |           |           |           |           |            |
| 4,2 | EM-042100 | EM-042125 | EM-042160 | EM-042200 | EM-042250 | EM-042315 | EM-042400 | EM-042500 | EM-042630 |           |            |
| 4,5 | EM-045100 | EM-045125 | EM-045160 | EM-045200 | EM-045250 | EM-045315 | EM-045400 |           |           |           |            |
| 5   | EM-050100 | EM-050125 | EM-050160 | EM-050200 | EM-050250 | EM-050315 | EM-050400 | EM-050500 | EM-050630 | EM-050800 |            |
| 5,1 |           |           |           |           | EM-051250 |           |           |           |           |           |            |
| 5,2 | EM-052100 | EM-052125 | EM-052160 | EM-052200 | EM-052250 | EM-052315 | EM-052400 | EM-052500 | EM-052630 |           |            |
| 5,5 | EM-055100 | EM-055125 | EM-055160 | EM-055200 | EM-055250 | EM-055315 | EM-055400 | EM-055500 | EM-055630 |           |            |
| 6   | EM-060100 | EM-060125 | EM-060160 | EM-060200 | EM-060250 | EM-060315 | EM-060400 | EM-060500 | EM-060630 | EM-060800 | EM-0601000 |
| 6,1 |           |           |           |           | EM-061250 |           |           |           |           |           |            |
| 6,2 | EM-062100 | EM-062125 | EM-062160 | EM-062200 | EM-062250 | EM-062315 | EM-062400 | EM-062500 | EM-062630 |           |            |
| 6,5 | EM-065100 | EM-065125 | EM-065160 | EM-065200 | EM-065250 | EM-065315 | EM-065400 | EM-065500 |           |           |            |
| 7   | EM-070100 | EM-070125 | EM-070160 | EM-070200 | EM-070250 | EM-070315 | EM-070400 | EM-070500 | EM-070630 |           |            |

Uwaga. Inne wymiary na zapytanie  
Note. Other dimensions on request.

**EM**


| d   | D  | k | R   |
|-----|----|---|-----|
| 7,5 | 12 | 5 | 0,5 |
| 8   | 14 |   |     |
| 8,1 |    |   |     |
| 8,2 |    |   |     |
| 8,5 |    |   |     |
| 9   |    |   |     |
| 9,5 |    |   |     |
| 10  | 16 |   |     |

| d    | D  | k | R   |
|------|----|---|-----|
| 10,1 | 16 | 5 | 0,5 |
| 10,2 |    |   |     |
| 10,5 |    |   |     |
| 11   | 18 | 7 | 0,8 |
| 12   |    |   |     |
| 12,2 |    |   |     |
| 12,5 |    |   |     |
| 14   | 22 |   |     |

| d    | D  | k | R   |
|------|----|---|-----|
| 14,2 | 22 | 7 | 0,8 |
| 16   |    |   |     |
| 16,2 |    |   |     |
| 18   | 24 | 8 | 1   |
| 20   | 26 |   |     |
| 25   | 32 |   |     |
| 32   | 40 |   |     |

DIN 1530/ISO 6751

Azotowany  
Nitrided

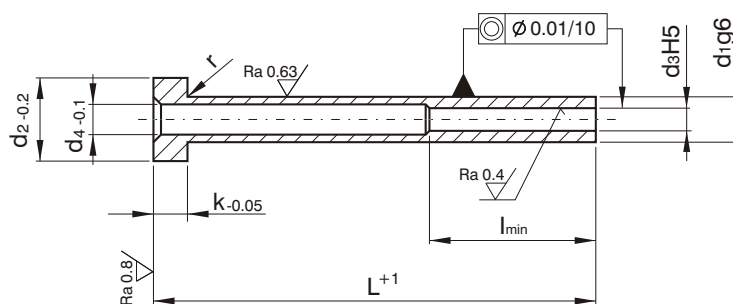
Mat: Stal narzędziowa do  
pracy na gorąco  
Hot working tool steel  
500+550°C

NR KAT.

| d    | L         |           |           |           |           |           |           |           |           |           |            |
|------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|------------|
|      | 100       | 125       | 160       | 200       | 250       | 315       | 400       | 500       | 630       | 800       | 1000       |
| 7,5  | EM-075100 | EM-075125 | EM-075160 | EM-075200 | EM-075250 | EM-075315 | EM-075400 | EM-075500 |           |           |            |
| 8    | EM-080100 | EM-080125 | EM-080160 | EM-080200 | EM-080250 | EM-080315 | EM-080400 | EM-080500 | EM-080630 | EM-080800 | EM-0801000 |
| 8,1  |           |           | EM-081160 |           | EM-081250 |           |           |           |           |           |            |
| 8,2  | EM-082100 | EM-082125 | EM-082160 | EM-082200 | EM-082250 | EM-082315 | EM-082400 | EM-082500 | EM-082630 | EM-082800 |            |
| 8,5  | EM-085100 | EM-085125 | EM-085160 | EM-085200 | EM-085250 | EM-085315 | EM-085400 | EM-085500 | EM-085630 |           |            |
| 9    | EM-090100 | EM-090125 | EM-090160 | EM-090200 | EM-090250 | EM-090315 | EM-090400 | EM-090500 | EM-090630 |           |            |
| 9,5  | EM-095100 | EM-095125 | EM-095160 | EM-095200 | EM-095250 | EM-095315 | EM-095400 | EM-095500 |           |           |            |
| 10   | EM-100100 | EM-100125 | EM-100160 | EM-100200 | EM-100250 | EM-100315 | EM-100400 | EM-100500 | EM-100630 | EM-100800 | EM-1001000 |
| 10,1 |           |           |           |           | EM-101250 |           |           |           |           |           |            |
| 10,2 | EM-102100 | EM-102125 | EM-102160 | EM-102200 | EM-102250 | EM-102315 | EM-102400 | EM-102500 | EM-102630 | EM-102800 |            |
| 10,5 | EM-105100 | EM-105125 | EM-105160 | EM-105200 | EM-105250 | EM-105315 | EM-105400 | EM-105500 | EM-105630 |           |            |
| 11   | EM-110100 | EM-110125 | EM-110160 | EM-110200 | EM-110250 | EM-110315 | EM-110400 | EM-110500 | EM-110630 |           |            |
| 12   | EM-120100 | EM-120125 | EM-120160 | EM-120200 | EM-120250 | EM-120315 | EM-120400 | EM-120500 | EM-120630 | EM-120800 | EM-1201000 |
| 12,2 | EM-122100 | EM-122125 | EM-122160 | EM-122200 | EM-122250 | EM-122315 | EM-122400 | EM-122500 | EM-122630 | EM-122800 |            |
| 12,5 | EM-125100 | EM-125125 | EM-125160 | EM-125200 | EM-125250 | EM-125315 | EM-125400 | EM-125500 | EM-125630 | EM-125800 |            |
| 14   | EM-140100 | EM-140125 | EM-140160 | EM-140200 | EM-140250 | EM-140315 | EM-140400 | EM-140500 | EM-140630 | EM-140800 | EM-1401000 |
| 14,2 |           |           |           |           | EM-142250 |           |           |           |           |           |            |
| 16   | EM-160100 | EM-160125 | EM-160160 | EM-160200 | EM-160250 | EM-160315 | EM-160400 | EM-160500 | EM-160630 | EM-160800 | EM-1601000 |
| 16,2 |           |           |           |           | EM-162250 |           |           |           |           |           |            |
| 18   | EM-180100 | EM-180125 | EM-180160 | EM-180200 | EM-180250 | EM-180315 | EM-180400 | EM-180500 | EM-180630 | EM-180800 | EM-1801000 |
| 20   | EM-200100 | EM-200125 | EM-200160 | EM-200200 | EM-200250 | EM-200315 | EM-200400 | EM-200500 | EM-200630 | EM-200800 | EM-2001000 |
| 25   |           |           | EM-250160 | EM-250200 | EM-250250 | EM-250315 | EM-250400 | EM-250500 | EM-250630 | EM-250800 | EM-2501000 |
| 32   |           |           | EM-320160 | EM-320200 | EM-320250 | EM-320315 | EM-320400 | EM-320500 | EM-320630 | EM-320800 | EM-3201000 |

Uwaga. Inne wymiary na zapytanie  
Note. Other dimensions on request.



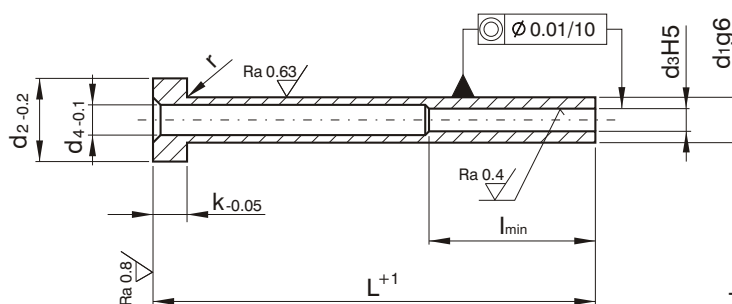
**WHT**


Trzon/Shaft: 60±2HRC  
Główka/Head: 45±5HRC

Mat: Stal narzędziowa  
Tool steel  
250°C

| d3   | d1   | d2           | k            | d4           | lmin         | L            |              |              |              |              |
|------|------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
|      |      |              |              |              |              | 60           | 75           | 100          | 125          | 150          |
| 1,5  | 3    | 6            | 3            | 1,8          | 35           | WHT-01503060 | WHT-01503075 | WHT-01503100 | WHT-01503125 | WHT-01503150 |
| 1,6  |      |              |              | WHT-01603060 |              | WHT-01603075 | WHT-01603100 | WHT-01603125 | WHT-01603150 |              |
| 2,0  | 4    | 8            |              | 2,5          |              | WHT-02004060 | WHT-02004075 | WHT-02004100 | WHT-02004125 | WHT-02004150 |
| 2,2  |      |              |              | WHT-02204060 |              | WHT-02204075 | WHT-02204100 | WHT-02204125 | WHT-02204150 |              |
| 2,5  | 2,8  | ----         |              | ----         |              | WHT-02504125 | WHT-02504150 |              |              |              |
| 2,5  | 5    | 10           |              | 3,0          | WHT-02505060 | WHT-02505075 | WHT-02505100 | WHT-02505125 | WHT-02505150 |              |
| 2,7  |      |              |              | WHT-02705060 | WHT-02705075 | WHT-02705100 | WHT-02705125 | WHT-02705150 |              |              |
| 3,0  |      |              |              | WHT-03005060 | WHT-03005075 | WHT-03005100 | WHT-03005125 | WHT-03005150 |              |              |
| 3,2  |      |              |              | WHT-03205060 | WHT-03205075 | WHT-03205100 | WHT-03205125 | WHT-03205150 |              |              |
| 3,5  |      |              | 3,8          | ----         | ----         | WHT-03505100 | WHT-03505125 | ----         |              |              |
| 3,5  | 6    | 12           | 5            | 45           | WHT-03506060 | WHT-03506075 | WHT-03506100 | WHT-03506125 | WHT-03506150 |              |
| 3,7  |      |              |              |              | WHT-03706060 | WHT-03706075 | WHT-03706100 | WHT-03706125 | WHT-03706150 |              |
| 4,0  |      |              |              |              | WHT-04006060 | WHT-04006075 | WHT-04006100 | WHT-04006125 | WHT-04006150 |              |
| 4,0  |      |              |              |              | ----         | WHT-04008075 | WHT-04008100 | WHT-04008125 | WHT-04008150 |              |
| 4,2  |      |              |              |              | WHT-04208060 | WHT-04208075 | WHT-04208100 | WHT-04208125 | WHT-04208150 |              |
| 5,0  | 8    | 14           |              |              | 5,5          | WHT-05008060 | WHT-05008075 | WHT-05008100 | WHT-05008125 | WHT-05008150 |
| 5,2  |      |              |              |              | WHT-05208060 | WHT-05208075 | WHT-05208100 | WHT-05208125 | WHT-05208150 |              |
| 5,5  |      |              |              |              | WHT-05508060 | WHT-05508075 | WHT-05508100 | WHT-05508125 | WHT-05508150 |              |
| 6,0  | 10   | 16           |              |              | 6,5          | WHT-06010060 | WHT-06010075 | WHT-06010100 | WHT-06010125 | WHT-06010150 |
| 6,2  |      |              | WHT-06210060 |              | WHT-06210075 | WHT-06210100 | WHT-06210125 | WHT-06210150 |              |              |
| 6,5  |      |              | 7,0          |              | ----         | WHT-06510075 | WHT-06510100 | WHT-06510125 | WHT-06510150 |              |
| 7,0  | 12   | 20           | 7,5          |              | ----         | WHT-07010075 | WHT-07010100 | WHT-07010125 | ----         |              |
| 8,0  |      |              | WHT-08012060 |              | WHT-08012075 | WHT-08012100 | WHT-08012125 | WHT-08012150 |              |              |
| 8,2  |      |              | WHT-08212060 | WHT-08212075 | WHT-08212100 | WHT-08212125 | WHT-08212150 |              |              |              |
| 8,5  | 14   | 22           | 7            | 9,0          | ----         | WHT-08512100 | WHT-08512125 | ----         |              |              |
| 10,0 |      |              |              | 10,5         | WHT-10014075 | WHT-10014100 | WHT-10014125 | WHT-10014150 |              |              |
| 10,5 |      |              |              | 11,0         | WHT-10514075 | WHT-10514100 | WHT-10514125 | WHT-10514150 |              |              |
| 11,0 |      |              |              | 11,5         | ----         | WHT-11014100 | WHT-11014125 | WHT-11014150 |              |              |
| 12,0 |      |              |              | 16           | 12,5         | WHT-12016075 | WHT-12016100 | WHT-12016125 | WHT-12016150 |              |
| 12,5 | 13,0 | WHT-12516075 |              |              | WHT-12516100 | WHT-12516125 | WHT-12516150 |              |              |              |

Uwaga. Inne wymiary na zapytanie  
Note. Other dimensions on request.

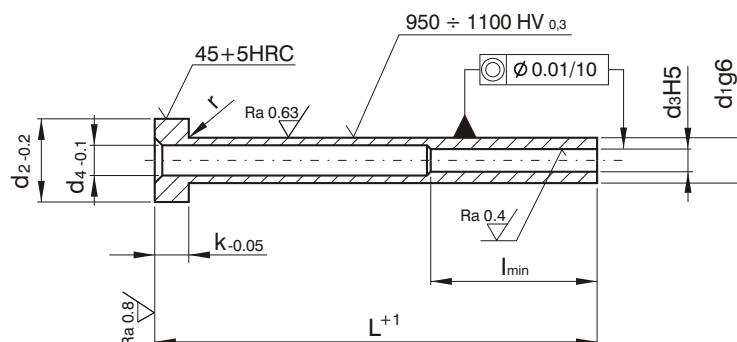
**WHT**

 Trzon/Shaft: 60±2HRC  
 Główna/Head: 45±5HRC

 Mat: Stal narzędziowa  
 Tool steel  
 250°C

| d3   | d1  | d2           | k    | d4           | lmin         | L            |              |              |              |
|------|-----|--------------|------|--------------|--------------|--------------|--------------|--------------|--------------|
|      |     |              |      |              |              | 175          | 200          | 225          | 250          |
| 1,5  | 3   | 6            | 3    | 1,8          | 35           | WHT-01503175 |              |              |              |
| 1,6  |     |              |      | 2,0          |              | WHT-01603175 |              |              |              |
| 2,0  | 4   | 8            |      | 2,5          |              | WHT-02004175 | WHT-02004200 | WHT-02004225 | WHT-02004250 |
| 2,2  |     |              |      | 2,5          |              | WHT-02204175 | WHT-02204200 | WHT-02204225 | WHT-02204250 |
| 2,5  | 5   | 10           |      | 3,0          |              | WHT-02505175 | WHT-02505200 | WHT-02505225 | WHT-02505250 |
| 2,7  |     |              |      | 3,0          |              | WHT-02705175 | WHT-02705200 | WHT-02705225 | WHT-02705250 |
| 3,0  | 6   | 12           | 5    | 3,5          | 45           | WHT-03005175 | WHT-03005200 | WHT-03005225 | WHT-03005250 |
| 3,2  |     |              |      | 3,5          |              | WHT-03205175 | WHT-03205200 | WHT-03205225 | WHT-03205250 |
| 3,5  | 4,0 | WHT-03506175 |      | WHT-03506200 |              | WHT-03506225 | WHT-03506250 |              |              |
| 3,7  | 4,0 | WHT-03706175 |      | WHT-03706200 |              | WHT-03706225 | ----         |              |              |
| 4,0  | 4,5 | WHT-04006175 |      | WHT-04006200 |              | WHT-04006225 | WHT-04006250 |              |              |
| 4,0  | 8   | 14           |      | 4,5          |              | WHT-04008175 | WHT-04008200 | WHT-04008225 | WHT-04008250 |
| 4,2  |     |              | 5,5  | WHT-04208175 | WHT-04208200 | WHT-04208225 | WHT-04208250 |              |              |
| 5,0  |     |              | 5,5  | WHT-05008175 | WHT-05008200 | WHT-05008225 | WHT-05008250 |              |              |
| 5,2  |     |              | 5,8  | WHT-05208175 | WHT-05208200 | WHT-05208225 | WHT-05208250 |              |              |
| 5,5  |     |              | 6,5  | WHT-05508175 | WHT-05508200 | WHT-05508225 | WHT-05508250 |              |              |
| 6,0  |     |              | 7,0  | WHT-06010175 | WHT-06010200 | WHT-06010225 | WHT-06010250 |              |              |
| 6,2  | 10  | 16           | 7    | 7,0          | 50           | WHT-06210175 | WHT-06210200 | WHT-06210225 | WHT-06210250 |
| 6,5  |     |              |      | 7,5          |              | WHT-06510175 | WHT-06510200 | WHT-06510225 | ----         |
| 7,0  | 8,5 | ----         |      | WHT-07010200 |              | WHT-07010225 | WHT-07010250 |              |              |
| 8,0  | 12  | 20           |      | 8,5          |              | WHT-08012175 | WHT-08012200 | WHT-08012225 | WHT-08012250 |
| 8,2  |     |              |      | 9,0          |              | WHT-08212175 | WHT-08212200 | WHT-08212225 | WHT-08212250 |
| 8,5  |     |              |      | ----         |              | WHT-08512200 | ----         | ----         |              |
| 10,0 | 14  | 22           | 10,5 | WHT-10014175 | WHT-10014200 | WHT-10014225 | WHT-10014250 |              |              |
| 10,5 |     |              | 11,0 | WHT-10514175 | WHT-10514200 | WHT-10514225 | WHT-10514250 |              |              |
| 11,0 |     |              | 11,5 | WHT-11014175 | WHT-11014200 | WHT-11014225 | ----         |              |              |
| 12,0 | 16  |              | 12,5 | WHT-12016175 | WHT-12016200 | WHT-12016225 | WHT-12016250 |              |              |
| 12,5 |     |              | 13,0 | WHT-12516175 | WHT-12516200 | WHT-12516225 | WHT-12516250 |              |              |

| d3   | d1 | d2 | k | d4   | l <sub>min</sub> | L            |              |              |     |
|------|----|----|---|------|------------------|--------------|--------------|--------------|-----|
|      |    |    |   |      |                  | 275          | 300          | 325          | 350 |
| 2,5  | 5  | 10 | 3 | 3,0  | 35               | WHT-02505275 |              |              |     |
| 2,7  |    |    |   | 3,0  |                  | WHT-02705275 |              |              |     |
| 3,0  |    |    |   | 3,5  |                  | WHT-03005275 | WHT-03005300 |              |     |
| 3,2  |    |    |   | 3,5  |                  | WHT-03205275 | WHT-03205300 |              |     |
| 3,5  | 6  | 12 | 5 | 4,0  | 45               | WHT-03506275 | WHT-03506300 |              |     |
| 4,0  |    |    |   | 4,0  |                  | WHT-04006275 | WHT-04006300 |              |     |
| 4,2  |    |    |   | 4,5  |                  | WHT-04208275 | ----         |              |     |
| 5,0  |    |    |   | 5,5  |                  | WHT-05008275 | WHT-05008300 | WHT-05008325 |     |
| 5,2  | 8  | 14 | 7 | 5,5  | 50               | WHT-05208275 | WHT-05208300 | WHT-05208325 |     |
| 5,5  |    |    |   | 5,8  |                  | WHT-05508275 | ----         | ----         |     |
| 6,0  |    |    |   | 6,5  |                  | WHT-06010275 | WHT-06010300 | WHT-06010325 |     |
| 6,2  |    |    |   | 6,5  |                  | WHT-06210275 | ----         | ----         |     |
| 8,0  | 12 | 20 | 7 | 8,5  |                  | WHT-08012275 | WHT-08012300 | ----         |     |
| 8,2  |    |    |   | 8,5  |                  | WHT-08212275 | ----         | ----         |     |
| 10,0 |    |    |   | 10,5 |                  | WHT-10014275 | WHT-10014300 | WHT-10014325 |     |
| 12,0 |    |    |   | 12,5 |                  | WHT-12016275 |              |              |     |

 Uwaga. Inne wymiary na zapytanie  
 Note. Other dimensions on request.



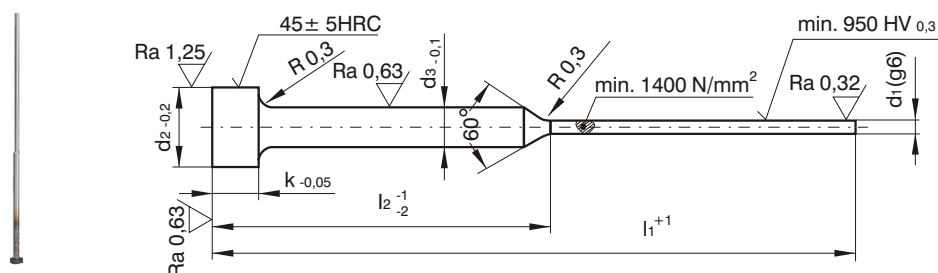
Azotowany  
Nitrided

Mat: Stal narzędziowa do  
pracy na gorąco  
Hot working tool steel  
500+550°C

| d3   | d1 | d2 | k | d4   | l <sub>min</sub> | L            |              |              |              |              |
|------|----|----|---|------|------------------|--------------|--------------|--------------|--------------|--------------|
|      |    |    |   |      |                  | 75           | 100          | 125          | 150          | 175          |
| 1,5  | 3  | 6  |   | 1,8  | 35               | EMT-01503075 | EMT-01503100 | EMT-01503125 | EMT-01503150 |              |
| 1,6  |    |    |   | 2,0  |                  | EMT-01603075 | EMT-01603100 | EMT-01603125 | EMT-01603150 |              |
| 2,0  |    |    |   | 2,5  |                  | EMT-02004075 | EMT-02004100 | EMT-02004125 | EMT-02004150 | EMT-02004175 |
| 2,2  | 4  | 8  |   | 2,5  | 35               | EMT-02204075 | EMT-02204100 | EMT-02204125 | EMT-02204150 | EMT-02204175 |
| 2,5  |    |    |   | 2,8  |                  | ----         | EMT-02504100 | ----         | ----         | ----         |
| 2,5  |    |    |   | 3,0  |                  | EMT-02505075 | EMT-02505100 | EMT-02505125 | EMT-02505150 | EMT-02505175 |
| 2,7  | 5  | 10 |   | 3,0  | 45               | EMT-02705075 | EMT-02705100 | EMT-02705125 | EMT-02705150 | ----         |
| 3,0  |    |    |   | 3,5  |                  | EMT-03005075 | EMT-03005100 | EMT-03005125 | EMT-03005150 | EMT-03005175 |
| 3,2  |    |    |   | 3,5  |                  | EMT-03205075 | EMT-03205100 | EMT-03205125 | EMT-03205150 | EMT-03205175 |
| 3,5  | 6  | 12 |   | 3,8  | 45               | ----         | EMT-03505100 | EMT-03505125 | EMT-03505150 | EMT-03505175 |
| 3,5  |    |    |   | 4,0  |                  | EMT-03506075 | EMT-03506100 | EMT-03506125 | EMT-03506150 | EMT-03506175 |
| 3,7  |    |    |   | 4,0  |                  | EMT-03706075 | EMT-03706100 | EMT-03706125 | EMT-03706150 | EMT-03706175 |
| 4,0  | 8  | 14 |   | 4,5  | 45               | EMT-04006075 | EMT-04006100 | EMT-04006125 | EMT-04006150 | EMT-04006175 |
| 4,2  |    |    |   | 4,5  |                  | EMT-04208075 | EMT-04208100 | EMT-04208125 | EMT-04208150 | EMT-04208175 |
| 5,0  |    |    |   | 5,5  |                  | EMT-05008075 | EMT-05008100 | EMT-05008125 | EMT-05008150 | EMT-05008175 |
| 5,2  | 10 | 16 |   | 5,5  | 45               | EMT-05208075 | EMT-05208100 | EMT-05208125 | EMT-05208150 | EMT-05208175 |
| 6,0  |    |    |   | 6,5  |                  | EMT-06010075 | EMT-06010100 | EMT-06010125 | EMT-06010150 | EMT-06010175 |
| 6,2  |    |    |   | 6,5  |                  | EMT-06210075 | EMT-06210100 | EMT-06210125 | EMT-06210150 | EMT-06210175 |
| 8,0  | 12 | 20 |   | 8,5  | 50               | EMT-08012075 | EMT-08012100 | EMT-08012125 | EMT-08012150 | EMT-08012175 |
| 8,2  |    |    |   | 8,5  |                  | EMT-08212075 | EMT-08212100 | EMT-08212125 | EMT-08212150 | EMT-08212175 |
| 10,0 |    |    |   | 10,5 |                  | EMT-10014075 | EMT-10014100 | EMT-10014125 | EMT-10014150 | EMT-10014175 |
| 10,2 | 14 | 22 |   | 10,5 | 50               | ----         | EMT-10214100 | EMT-10214125 | EMT-10214150 | ----         |
| 10,5 |    |    |   | 11,0 |                  | ----         | EMT-10514100 | EMT-10514125 | EMT-10514150 | EMT-10514175 |
| 12,0 |    |    |   | 12,5 |                  | EMT-12016075 | EMT-12016100 | EMT-12016125 | EMT-12016150 | EMT-12016175 |
| 12,5 | 16 |    |   | 13,0 |                  | ----         | EMT-12516100 | EMT-12516125 | EMT-12516150 | EMT-12516175 |

| d3   | d1 | d2 | k | d4   | lmin | L            |              |              |              |
|------|----|----|---|------|------|--------------|--------------|--------------|--------------|
|      |    |    |   |      |      | 200          | 225          | 250          | 275          |
| 2,0  | 4  | 8  | 3 | 2,5  | 35   | EMT-02004200 |              |              |              |
| 3,0  | 5  | 10 |   | 3,5  |      | EMT-03005200 | EMT-03005225 |              |              |
| 3,2  |    |    |   |      |      | EMT-03205200 | EMT-03205225 |              |              |
| 3,5  | 6  | 12 | 5 | 4,0  | 45   | EMT-03506200 | ----         |              |              |
| 4,0  |    |    |   | 4,5  |      | EMT-04006200 | EMT-04006225 |              |              |
| 4,2  |    |    |   |      |      | EMT-04208200 | EMT-04208225 |              |              |
| 5,0  | 8  | 14 | 5 | 5,5  | 45   | EMT-05008200 | EMT-05008225 |              |              |
| 5,2  |    |    |   |      |      | EMT-05208200 | EMT-05208225 |              |              |
| 6,0  | 10 | 16 | 5 | 6,5  | 45   | EMT-06010200 | EMT-06010225 | EMT-06010250 |              |
| 6,2  |    |    |   |      |      | EMT-06210200 | EMT-06210225 | EMT-06210250 |              |
| 8,0  | 12 | 20 | 7 | 8,5  | 50   | EMT-08012200 | EMT-08012225 | EMT-08012250 | EMT-08012275 |
| 8,2  |    |    |   |      |      | EMT-08212200 | EMT-08212225 | EMT-08212250 | EMT-08212275 |
| 10,0 | 14 | 22 | 7 | 10,5 | 50   | EMT-10014200 | EMT-10014225 | EMT-10014250 | EMT-10014275 |
| 10,2 |    |    |   |      |      | EMT-10214200 | EMT-10214225 | EMT-10214250 | EMT-10214275 |
| 10,5 | 16 | 22 | 7 | 11,0 | 50   | EMT-10514200 | EMT-10514225 | ----         | ----         |
| 12,0 |    |    |   |      |      | EMT-12016200 | EMT-12016225 | EMT-12016250 | EMT-12016275 |
| 12,5 |    |    |   |      |      | EMT-12516200 | EMT-12516225 | EMT-12516250 | EMT-12516275 |

Uwaga. Inne wymiary na zapytanie  
Note. Other dimensions on request.



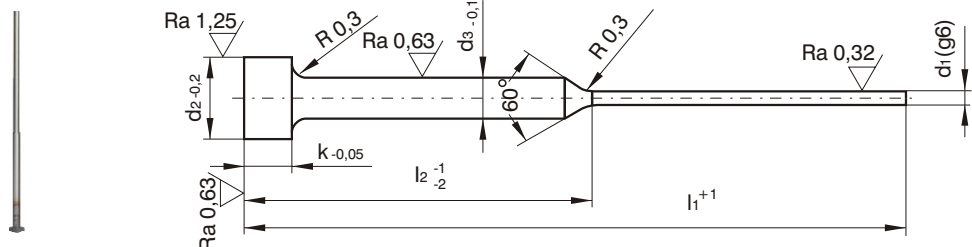
# ESM

DIN 1530

Azotowany/Nitrided

Mat: Stal narzędziowa do pracy na gorąco  
Hot working tool steel  
500÷550°C

| d <sub>1</sub> | d <sub>2</sub> | d <sub>3</sub> | k | NR KAT.                                  |   |   |   |   |
|----------------|----------------|----------------|---|--|---|---|---|---|
|                |                |                |   | I <sub>2</sub> =35<br>I <sub>1</sub> =80 | I <sub>2</sub> =50<br>I <sub>1</sub> =100 | I <sub>2</sub> =50<br>I <sub>1</sub> =125 | I <sub>2</sub> =75<br>I <sub>1</sub> =160 | I <sub>2</sub> =75<br>I <sub>1</sub> =200 |
| 0,8            | 4              | 2              | 2 | ESM-0835080                              | ESM-0850100                               | ESM-0850125                               | ESM-0875160                               |   |
| 0,9            |                |                |   | ESM-0935080                              | ESM-0950100                               | ESM-0950125                               | ESM-0975160                               |   |
| 1,0            |                |                |   | ESM-1035080                              | ESM-1050100                               | ESM-1050125                               | ESM-1075160                               |   |
| 1,1            |                |                |   | ESM-1135080                              | ESM-1150100                               | ESM-1150125                               | ESM-1175160                               |   |
| 1,2            |                |                |   | ESM-1235080                              | ESM-1250100                               | ESM-1250125                               | ESM-1275160                               |   |
| 1,3            |                |                |   | ESM-1335080                              | ESM-1350100                               | ESM-1350125                               | ESM-1375160                               |   |
| 1,4            |                |                |   | ESM-1435080                              | ESM-1450100                               | ESM-1450125                               | ESM-1475160                               |   |
| 1,5            | 6              | 3              | 3 | ESM-1535080                              | ESM-1550100                               | ESM-1550125                               | ESM-1575160                               | ESM-1575200                               |
| 1,6            |                |                |   | ESM-1635080                              | ESM-1650100                               | ESM-1650125                               | ESM-1675160                               | ESM-1675200                               |
| 1,7            |                |                |   | ESM-1735080                              | ESM-1750100                               | ESM-1750125                               | ESM-1775160                               | ESM-1775200                               |
| 1,8            |                |                |   | ESM-1835080                              | ESM-1850100                               | ESM-1850125                               | ESM-1875160                               | ESM-1875200                               |
| 1,9            |                |                |   | ESM-1935080                              | ESM-1950100                               | ESM-1950125                               | ESM-1975160                               | ESM-1975200                               |
| 2,0            |                |                |   | ESM-2035080                              | ESM-2050100                               | ESM-2050125                               | ESM-2075160                               | ESM-2075200                               |
| 2,1            |                |                |   | ESM-2135080                              | ESM-2150100                               | ESM-2150125                               | ESM-2175160                               | ESM-2175200                               |
| 2,2            |                |                |   | ESM-2235080                              | ESM-2250100                               | ESM-2250125                               | ESM-2275160                               | ESM-2275200                               |
| 2,3            |                |                |   | ESM-2335080                              | ESM-2350100                               | ESM-2350125                               | ESM-2375160                               | ESM-2375200                               |
| 2,4            |                |                |   | ESM-2435080                              | ESM-2450100                               | ESM-2450125                               | ESM-2475160                               | ESM-2475200                               |
| 2,5            |                |                |   |  | ESM-2550100                               | ESM-2550125                               | ESM-2575160                               | ESM-2575200                               |
| 2,6            |                |                |   |  | ESM-2650100                               | ESM-2650125                               | ESM-2675160                               | ESM-2675200                               |
| 2,7            |                |                |   |  | ESM-2750100                               | ESM-2750125                               | ESM-2775160                               | ESM-2775200                               |
| 2,8            |                |                |   |  | ESM-2850100                               | ESM-2850125                               | ESM-2875160                               | ESM-2875200                               |
| 2,9            |                |                |   |  | ESM-2950100                               | ESM-2950125                               | ESM-2975160                               | ESM-2975200                               |



# OH

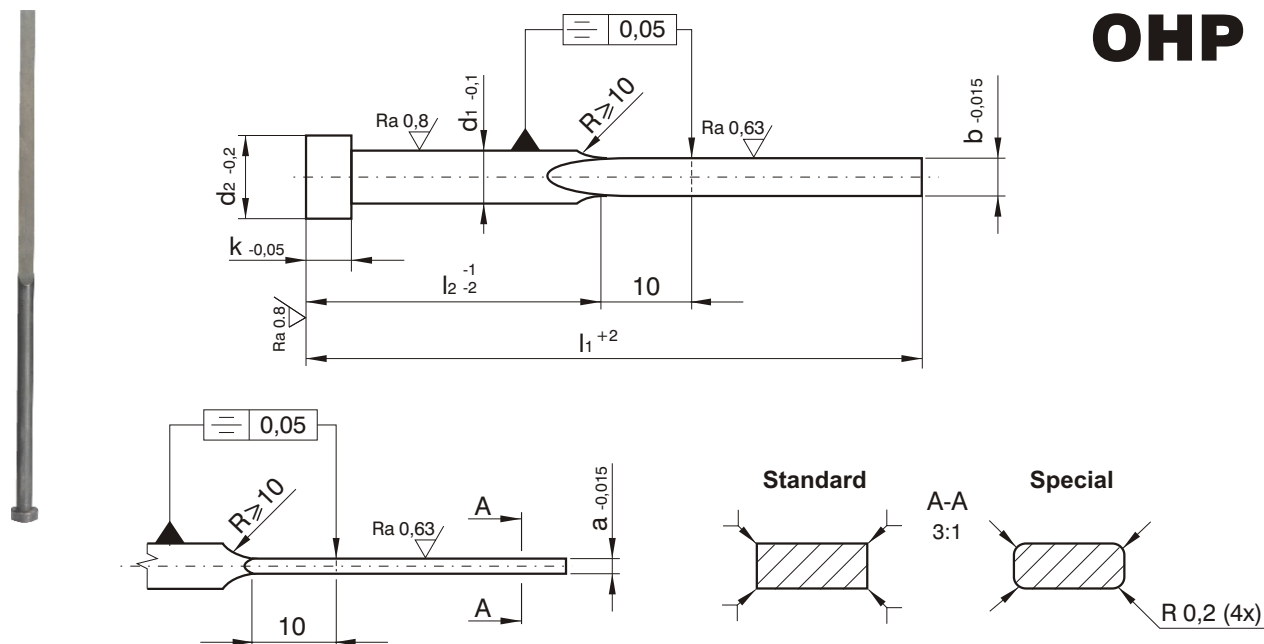
DIN 1530

Trzon/Shaft: 60±2HRC  
Główka/Head: 45±5HRC

Mat: Stal narzędziowa  
Tool steel  
250° C

| d <sub>1</sub> | d <sub>2</sub> | d <sub>3</sub> | k | NR KAT.                                  |   |   |   |   |
|----------------|----------------|----------------|---|--|---|---|---|---|
|                |                |                |   | I <sub>2</sub> =35<br>I <sub>1</sub> =80 | I <sub>2</sub> =50<br>I <sub>1</sub> =100 | I <sub>2</sub> =50<br>I <sub>1</sub> =125 | I <sub>2</sub> =75<br>I <sub>1</sub> =160 | I <sub>2</sub> =75<br>I <sub>1</sub> =200 |
| 0,8            | 4              | 2              | 2 | OH - 080080                              | OH - 080100                               | OH - 080125                               | OH - 080160                               |   |
| 0,9            |                |                |   | OH - 090080                              | OH - 090100                               | OH - 090125                               | OH - 090160                               |   |
| 1,0            |                |                |   | OH - 100080                              | OH - 100100                               | OH - 100125                               | OH - 100160                               |   |
| 1,1            |                |                |   | OH - 110080                              | OH - 110100                               | OH - 110125                               | OH - 110160                               |   |
| 1,2            |                |                |   | OH - 120080                              | OH - 120100                               | OH - 120125                               | OH - 120160                               |   |
| 1,3            |                |                |   | OH - 130080                              | OH - 130100                               | OH - 130125                               | OH - 130160                               |   |
| 1,4            |                |                |   | OH - 140080                              | OH - 140100                               | OH - 140125                               | OH - 140160                               |   |
| 1,5            | 6              | 3              | 3 | OH - 150080                              | OH - 150100                               | OH - 150125                               | OH - 150160                               | OH - 150200                               |
| 1,6            |                |                |   | OH - 160080                              | OH - 160100                               | OH - 160125                               | OH - 160160                               | OH - 160200                               |
| 1,7            |                |                |   | OH - 170080                              | OH - 170100                               | OH - 170125                               | OH - 170160                               | OH - 170200                               |
| 1,8            |                |                |   | OH - 180080                              | OH - 180100                               | OH - 180125                               | OH - 180160                               | OH - 180200                               |
| 1,9            |                |                |   | OH - 190080                              | OH - 190100                               | OH - 190125                               | OH - 190160                               | OH - 190200                               |
| 2,0            |                |                |   | OH - 200080                              | OH - 200100                               | OH - 200125                               | OH - 200160                               | OH - 200200                               |
| 2,1            |                |                |   | OH - 210080                              | OH - 210100                               | OH - 210125                               | OH - 210160                               | OH - 210200                               |
| 2,2            |                |                |   | OH - 220080                              | OH - 220100                               | OH - 220125                               | OH - 220160                               | OH - 220200                               |
| 2,3            |                |                |   | OH - 230080                              | OH - 230100                               | OH - 230125                               | OH - 230160                               | OH - 230200                               |
| 2,4            |                |                |   | OH - 240080                              | OH - 240100                               | OH - 240125                               | OH - 240160                               | OH - 240200                               |
| 2,5            |                |                |   |  | OH - 250100                               | OH - 250125                               | OH - 250160                               | OH - 250200                               |
| 2,6            |                |                |   |  | OH - 260100                               | OH - 260125                               | OH - 260160                               | OH - 260200                               |
| 2,7            |                |                |   |  | OH - 270100                               | OH - 270125                               | OH - 270160                               | OH - 270200                               |
| 2,8            |                |                |   |  | OH - 280100                               | OH - 280125                               | OH - 280160                               | OH - 280200                               |
| 2,9            |                |                |   |  | OH - 290100                               | OH - 290125                               | OH - 290160                               | OH - 290200                               |

Uwaga. Inne wymiary na zapytanie / Note. Other dimensions on request.

**OHP**


Trzon/Shaft: 60±2HRC  
Główka/Head: 45±5HRC

Mat: Stal narzędziowa  
Tool steel  
250° C

**Special** - wykonanie opcjonalne na życzenie  
- optional execution on request

| b          | a          | d <sub>1</sub> | d <sub>2</sub> | k | NR KATALOGOWY           |                         |                          |                          |                          |                          |
|------------|------------|----------------|----------------|---|-------------------------|-------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
|            |            |                |                |   | <b>l<sub>1</sub>=63</b> | <b>l<sub>1</sub>=80</b> | <b>l<sub>1</sub>=100</b> | <b>l<sub>1</sub>=125</b> | <b>l<sub>1</sub>=160</b> | <b>l<sub>1</sub>=200</b> |
|            |            |                |                |   | <b>l<sub>2</sub>=30</b> | <b>l<sub>2</sub>=40</b> | <b>l<sub>2</sub>=50</b>  | <b>l<sub>2</sub>=60</b>  | <b>l<sub>2</sub>=80</b>  | <b>l<sub>2</sub>=100</b> |
| <b>3,8</b> | <b>0,8</b> | 4,2            | 8              | 3 | OHP-03808063            | OHP-03808080            | OHP-03808100             | OHP-03808125             |                          |                          |
|            | <b>1,0</b> |                |                |   | OHP-03810063            | OHP-03810080            | OHP-03810100             | OHP-03810125             | OHP-03810160             |                          |
|            | <b>1,2</b> |                |                |   |                         | OHP-03812080            | OHP-03812100             | OHP-03812125             | OHP-03812160             | OHP-03812200             |
| <b>4,5</b> | <b>1,0</b> | 5,0            | 10             |   |                         | OHP-04510080            | OHP-04510100             | OHP-04510125             | OHP-04510160             | OHP-04510200             |
|            | <b>1,2</b> |                |                |   |                         | OHP-04512080            | OHP-04512100             | OHP-04512125             | OHP-04512160             | OHP-04512200             |
|            | <b>1,5</b> |                |                |   |                         | ----                    | OHP-04515100             | OHP-04515125             | OHP-04515160             | OHP-04515200             |
| <b>5,5</b> | <b>1,0</b> | 6,0            | 12             | 5 |                         | OHP-05510080            | OHP-05510100             | OHP-05510125             | OHP-05510160             | ----                     |
|            | <b>1,2</b> |                |                |   |                         | OHP-05512080            | OHP-05512100             | OHP-05512125             | OHP-05512160             | OHP-05512200             |

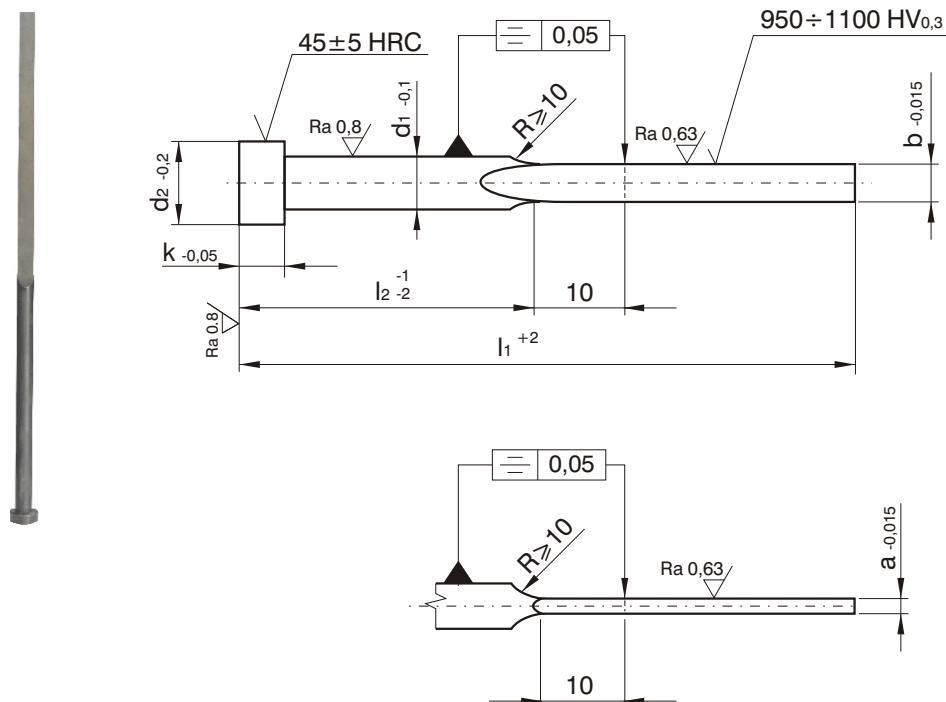
| b           | a          | d <sub>1</sub> | d <sub>2</sub> | k | NR KATALOGOWY            |                          |                          |                          |                          |                          |
|-------------|------------|----------------|----------------|---|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
|             |            |                |                |   | <b>l<sub>1</sub>=100</b> | <b>l<sub>1</sub>=125</b> | <b>l<sub>1</sub>=160</b> | <b>l<sub>1</sub>=200</b> | <b>l<sub>1</sub>=250</b> | <b>l<sub>1</sub>=315</b> |
|             |            |                |                |   | <b>l<sub>2</sub>=50</b>  | <b>l<sub>2</sub>=60</b>  | <b>l<sub>2</sub>=80</b>  | <b>l<sub>2</sub>=100</b> | <b>l<sub>2</sub>=125</b> | <b>l<sub>2</sub>=160</b> |
| <b>5,5</b>  | <b>1,5</b> | 6,0            | 12             | 5 | OHP-05515100             | OHP-05515125             | OHP-05515160             | OHP-05515200             |                          |                          |
|             | <b>2,0</b> |                |                |   | ----                     | OHP-05520125             | OHP-05520160             | OHP-05520200             |                          |                          |
| <b>7,5</b>  | <b>1,2</b> | 8,0            | 14             |   | OHP-07512100             | OHP-07512125             | OHP-07512160             | OHP-07512200             |                          |                          |
|             | <b>1,5</b> |                |                |   |                          | OHP-07515125             | OHP-07515160             | OHP-07515200             | OHP-07515250             |                          |
|             | <b>2,0</b> |                |                |   |                          |                          | OHP-07520160             | OHP-07520200             | OHP-07520250             |                          |
| <b>9,5</b>  | <b>1,5</b> | 10             | 16             |   |                          |                          | OHP-09515160             | OHP-09515200             | OHP-09515250             |                          |
|             | <b>2,0</b> |                |                |   |                          |                          |                          | OHP-09520200             | OHP-09520250             | OHP-09520315             |
| <b>11,5</b> | <b>2,0</b> | 12             | 18             | 7 |                          |                          |                          | OHP-11520200             | OHP-11520250             | OHP-11520315             |
|             | <b>2,5</b> |                |                |   |                          |                          |                          | OHP-11525200             | OHP-11525250             | OHP-11525315             |

Uwaga. Inne wymiary na zapytanie

**Special** - przykład zamówienia: OHP-05515100R

Note. Other dimensions on request

**Special** - example order: OHP-05515100R

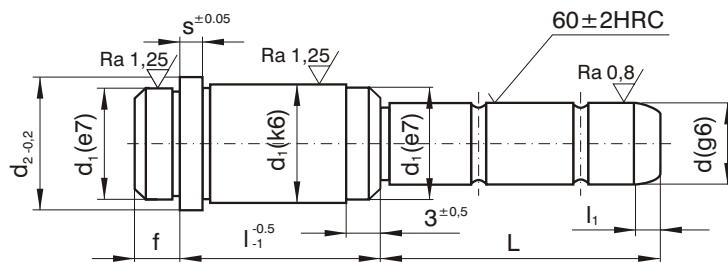
**ESP**


Azotowany  
Nitrided  
Mat: Stal narzędziowa do  
pracy na gorąco  
Hot working tool steel  
500÷550°C

| b   | a   | d <sub>1</sub> | d <sub>2</sub> | k | NR KATALOGOWY      |                     |                     |                     |                     |
|-----|-----|----------------|----------------|---|--------------------|---------------------|---------------------|---------------------|---------------------|
|     |     |                |                |   | I <sub>1</sub> =80 | I <sub>1</sub> =100 | I <sub>1</sub> =125 | I <sub>1</sub> =160 | I <sub>1</sub> =200 |
|     |     |                |                |   | I <sub>2</sub> =40 | I <sub>2</sub> =50  | I <sub>2</sub> =60  | I <sub>2</sub> =80  | I <sub>2</sub> =100 |
| 3,8 | 0,8 | 4,2            | 8              | 3 | ESP-03808080       | ESP-03808100        | ESP-03808125        |                     |                     |
|     | 1,0 |                |                |   | ESP-03810080       | ESP-03810100        | ESP-03810125        | ESP-03810160        |                     |
|     | 1,2 |                |                |   | ESP-03812080       | ESP-03812100        | ESP-03812125        | ESP-03812160        |                     |
| 4,5 | 1,0 | 5,0            | 10             | 5 | ESP-04510080       | ESP-04510100        | ESP-04510125        | ESP-04510160        |                     |
|     | 1,2 |                |                |   | ESP-04512080       | ESP-04512100        | ESP-04512125        | ESP-04512160        |                     |
|     | 1,5 |                |                |   |                    | ESP-04515100        | ESP-04515125        | ESP-04515160        | ESP-04515200        |
| 5,5 | 1,0 | 6,0            | 12             | 5 | ESP-05510080       | ESP-05510100        | ESP-05510125        | ESP-05510160        |                     |
|     | 1,2 |                |                |   | ESP-05512080       | ESP-05512100        | ESP-05512125        | ESP-05512160        |                     |
|     | 1,5 |                |                |   |                    | ESP-05515100        | ESP-05515125        | ESP-05515160        | ESP-05515200        |
|     | 2,0 |                |                |   |                    |                     | ESP-05520125        | ESP-05520160        | ESP-05520200        |

| b    | a   | d <sub>1</sub> | d <sub>2</sub> | k | NR KATALOGOWY       |                     |                     |                     |                     |                     |
|------|-----|----------------|----------------|---|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|
|      |     |                |                |   | I <sub>1</sub> =125 | I <sub>1</sub> =160 | I <sub>1</sub> =200 | I <sub>1</sub> =250 | I <sub>1</sub> =315 | I <sub>1</sub> =400 |
|      |     |                |                |   | I <sub>2</sub> =60  | I <sub>2</sub> =80  | I <sub>2</sub> =100 | I <sub>2</sub> =125 | I <sub>2</sub> =160 | I <sub>2</sub> =200 |
| 7,5  | 1,2 | 8,0            | 14             | 5 | ESP-07512125        | ESP-07512160        | ESP-07512200        |                     |                     |                     |
|      | 1,5 |                |                |   | ESP-07515125        | ESP-07515160        | ESP-07515200        | ESP-07515250        |                     |                     |
|      | 2,0 |                |                |   |                     | ESP-07520160        | ESP-07520200        | ESP-07520250        | ESP-07520315        |                     |
| 9,5  | 1,5 | 10             | 16             | 7 |                     | ESP-09515160        | ESP-09515200        | ESP-09515250        | ESP-09515315        |                     |
|      | 2,0 |                |                |   |                     |                     | ESP-09520200        | ESP-09520250        | ESP-09520315        | ESP-09520400        |
| 11,5 | 2,0 | 12             | 18             | 7 |                     |                     | ESP-11520200        | ESP-11520250        | ESP-11520315        | ESP-11520400        |
|      | 2,5 |                |                |   |                     |                     | ESP-11525200        | ESP-11525250        | ESP-11525315        | ESP-11525400        |
| 15,5 | 2,0 | 16             | 22             | 7 |                     |                     | ESP-15520200        | ESP-15520250        | ESP-15520315        | ESP-15520400        |
|      | 2,5 |                |                |   |                     |                     | ESP-15525200        | ESP-15525250        | ESP-15525315        | ESP-15525400        |

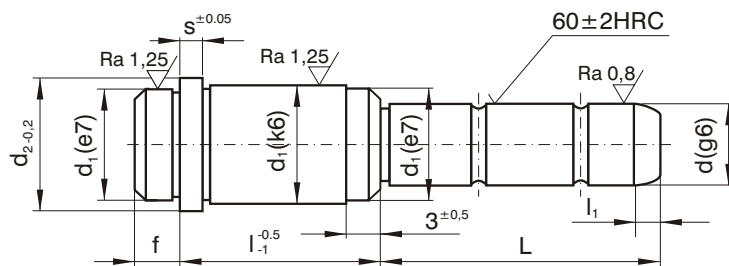
Uwaga. Inne wymiary na zapytanie  
Note. Other dimensions on request.


**SLE**

| d     | d <sub>1</sub> | d <sub>2</sub> | s | f | l <sub>1</sub> | l  | L   | NR KAT.      | NR KAT.      |
|-------|----------------|----------------|---|---|----------------|----|-----|--------------|--------------|
| 9/10  | 14             | 16             | 3 | 3 | 4              | 9  | 20  | SLE-09009020 | SLE-10009020 |
|       |                |                |   |   |                |    | 35  | SLE-09009035 | SLE-10009035 |
|       |                |                |   |   |                |    | 50  | SLE-09009050 | SLE-10009050 |
|       |                |                |   |   |                | 12 | 25  | SLE-09012025 | SLE-10012025 |
|       |                |                |   |   |                |    | 45  | SLE-09012045 | SLE-10012045 |
|       |                |                |   |   |                |    | 65  | SLE-09012065 | SLE-10012065 |
|       |                |                |   |   |                | 17 | 20  | SLE-09017020 | SLE-10017020 |
|       |                |                |   |   |                |    | 30  | SLE-09017030 | SLE-10017030 |
|       |                |                |   |   |                |    | 50  | SLE-09017050 | SLE-10017050 |
|       |                |                |   |   |                |    | 70  | SLE-09017070 | SLE-10017070 |
|       |                |                |   |   |                | 22 | 25  | SLE-09022025 | SLE-10022025 |
|       |                |                |   |   |                |    | 35  | SLE-09022035 | SLE-10022035 |
|       |                |                |   |   |                |    | 55  | SLE-09022055 | SLE-10022055 |
|       |                |                |   |   |                |    | 75  | SLE-09022075 | SLE-10022075 |
|       |                |                |   |   |                |    | 95  | SLE-09022095 | SLE-10022095 |
|       |                |                |   |   |                | 27 | 20  | SLE-09027020 | SLE-10027020 |
|       |                |                |   |   |                |    | 30  | SLE-09027030 | SLE-10027030 |
|       |                |                |   |   |                |    | 50  | SLE-09027050 | SLE-10027050 |
|       |                |                |   |   |                |    | 70  | SLE-09027070 | SLE-10027070 |
|       |                |                |   |   |                |    | 90  | SLE-09027090 | SLE-10027090 |
|       |                |                |   |   |                | 36 | 25  | SLE-09036025 | SLE-10036025 |
|       |                |                |   |   |                |    | 45  | SLE-09036045 | SLE-10036045 |
|       |                |                |   |   |                |    | 65  | SLE-09036065 | SLE-10036065 |
|       |                |                |   |   |                |    | 85  | SLE-09036085 | SLE-10036085 |
|       |                |                |   |   |                | 46 | 30  | SLE-09046030 | SLE-10046030 |
|       |                |                |   |   |                |    | 45  | SLE-09046045 | SLE-10046045 |
|       |                |                |   |   |                |    | 70  | SLE-09046070 | SLE-10046070 |
|       |                |                |   |   |                | 56 | 35  | SLE-09056035 | SLE-10056035 |
|       |                |                |   |   |                |    | 60  | SLE-09056060 | SLE-10056060 |
| 14/15 | 20             | 25             | 6 | 9 | 7              | 17 | 35  | SLE-14017035 | SLE-15017035 |
|       |                |                |   |   |                |    | 55  | SLE-14017055 | SLE-15017055 |
|       |                |                |   |   |                |    | 75  | SLE-14017075 | SLE-15017075 |
|       |                |                |   |   |                |    | 95  | SLE-14017095 | SLE-15017095 |
|       |                |                |   |   |                | 22 | 30  | SLE-14022030 | SLE-15022030 |
|       |                |                |   |   |                |    | 50  | SLE-14022050 | SLE-15022050 |
|       |                |                |   |   |                |    | 70  | SLE-14022070 | SLE-15022070 |
|       |                |                |   |   |                |    | 90  | SLE-14022090 | SLE-15022090 |
|       |                |                |   |   |                |    | 110 | SLE-14022110 | SLE-15022110 |
|       |                |                |   |   |                |    | 125 | SLE-14022125 | SLE-15022125 |
|       |                |                |   |   |                |    | 150 | SLE-14022150 | SLE-15022150 |
|       |                |                |   |   |                | 27 | 30  | SLE-14027030 | SLE-15027030 |
|       |                |                |   |   |                |    | 45  | SLE-14027045 | SLE-15027045 |
|       |                |                |   |   |                |    | 65  | SLE-14027065 | SLE-15027065 |
|       |                |                |   |   |                |    | 85  | SLE-14027085 | SLE-15027085 |
|       |                |                |   |   |                |    | 105 | SLE-14027105 | SLE-15027105 |
|       |                |                |   |   |                |    | 125 | SLE-14027125 | SLE-15027125 |
|       |                |                |   |   |                |    | 145 | SLE-14027145 | SLE-15027145 |
|       |                |                |   |   |                |    | 165 | SLE-14027165 | SLE-15027165 |
|       |                |                |   |   |                | 36 | 35  | SLE-14036035 | SLE-15036035 |
|       |                |                |   |   |                |    | 55  | SLE-14036055 | SLE-15036055 |
|       |                |                |   |   |                |    | 75  | SLE-14036075 | SLE-15036075 |
|       |                |                |   |   |                |    | 95  | SLE-14036095 | SLE-15036095 |

| d     | d <sub>1</sub> | d <sub>2</sub> | s | f | l <sub>1</sub> | l   | L            | NR KAT.      | NR KAT.      |
|-------|----------------|----------------|---|---|----------------|-----|--------------|--------------|--------------|
| 14/15 | 20             | 25             | 6 | 9 | 7              | 36  | 125          | SLE-14036125 | SLE-15036125 |
|       |                |                |   |   |                |     | 155          | SLE-14036155 | SLE-15036155 |
|       |                |                |   |   |                | 46  | 35           | SLE-14046035 | SLE-15046035 |
|       |                |                |   |   |                |     | 45           | SLE-14046045 | SLE-15046045 |
|       |                |                |   |   |                |     | 65           | SLE-14046065 | SLE-15046065 |
|       |                |                |   |   |                |     | 85           | SLE-14046085 | SLE-15046085 |
|       |                |                |   |   |                |     | 105          | SLE-14046105 | SLE-15046105 |
|       |                |                |   |   |                |     | 125          | SLE-14046125 | SLE-15046125 |
|       |                |                |   |   |                |     | 145          | SLE-14046145 | SLE-15046145 |
|       |                |                |   |   |                | 56  | 35           | SLE-14056035 | SLE-15056035 |
|       |                |                |   |   |                |     | 55           | SLE-14056055 | SLE-15056055 |
|       |                |                |   |   |                |     | 75           | SLE-14056075 | SLE-15056075 |
|       |                |                |   |   |                |     | 95           | SLE-14056095 | SLE-15056095 |
|       |                |                |   |   |                |     | 135          | SLE-14056135 | SLE-15056135 |
|       |                |                |   |   |                | 66  | 55           | SLE-14066055 | SLE-15066055 |
|       |                |                |   |   |                |     | 65           | SLE-14066065 | SLE-15066065 |
|       |                |                |   |   |                |     | 95           | SLE-14066095 | SLE-15066095 |
|       |                |                |   |   |                |     | 125          | SLE-14066125 | SLE-15066125 |
|       |                |                |   |   |                | 76  | 55           | SLE-14076055 | SLE-15076055 |
|       |                |                |   |   |                |     | 95           | SLE-14076095 | SLE-15076095 |
|       |                |                |   |   |                | 86  | 55           | SLE-14086055 | SLE-15086055 |
|       |                |                |   |   |                |     | 95           | SLE-14086095 | SLE-15086095 |
|       |                |                |   |   |                | 96  | 55           | SLE-14096055 | SLE-15096055 |
|       |                |                |   |   |                |     | 95           | SLE-14096095 | SLE-15096095 |
|       |                |                |   |   |                | 116 | 75           | SLE-14116075 | SLE-15116075 |
| 18/20 | 26             | 31             | 6 | 9 | 7              | 17  | 35           | SLE-18017035 | SLE-20017035 |
|       |                |                |   |   |                |     | 55           | SLE-18017055 | SLE-20017055 |
|       |                |                |   |   |                |     | 75           | SLE-18017075 | SLE-20017075 |
|       |                |                |   |   |                |     | 120          | SLE-18017120 | SLE-20017120 |
|       |                |                |   |   |                | 22  | 35           | SLE-18022035 | SLE-20022035 |
|       |                |                |   |   |                |     | 45           | SLE-18022045 | SLE-20022045 |
|       |                |                |   |   |                |     | 65           | SLE-18022065 | SLE-20022065 |
|       |                |                |   |   |                |     | 85           | SLE-18022085 | SLE-20022085 |
|       |                |                |   |   |                |     | 115          | SLE-18022115 | SLE-20022115 |
|       |                |                |   |   |                | 27  | 35           | SLE-18027035 | SLE-20027035 |
|       |                |                |   |   |                |     | 45           | SLE-18027045 | SLE-20027045 |
|       |                |                |   |   |                |     | 65           | SLE-18027065 | SLE-20027065 |
|       |                |                |   |   |                |     | 85           | SLE-18027085 | SLE-20027085 |
|       |                |                |   |   |                |     | 105          | SLE-18027105 | SLE-20027105 |
|       |                |                |   |   |                |     | 125          | SLE-18027125 | SLE-20027125 |
|       |                |                |   |   |                |     | 165          | SLE-18027165 | SLE-20027165 |
|       |                |                |   |   |                |     | 225          | SLE-18027225 | SLE-20027225 |
|       |                |                |   |   |                | 245 | SLE-18027245 | SLE-20027245 |              |
|       |                |                |   |   |                | 36  | 35           | SLE-18036035 | SLE-20036035 |
|       |                |                |   |   |                |     | 55           | SLE-18036055 | SLE-20036055 |
|       |                |                |   |   |                |     | 75           | SLE-18036075 | SLE-20036075 |
|       |                |                |   |   |                |     | 95           | SLE-18036095 | SLE-20036095 |
|       |                |                |   |   |                |     | 115          | SLE-18036115 | SLE-20036115 |
|       |                |                |   |   |                |     | 135          | SLE-18036135 | SLE-20036135 |
|       |                |                |   |   |                |     | 165          | SLE-18036165 | SLE-20036165 |
| 225   | SLE-18036225   | SLE-20036225   |   |   |                |     |              |              |              |
| 255   | SLE-18036255   | SLE-20036255   |   |   |                |     |              |              |              |

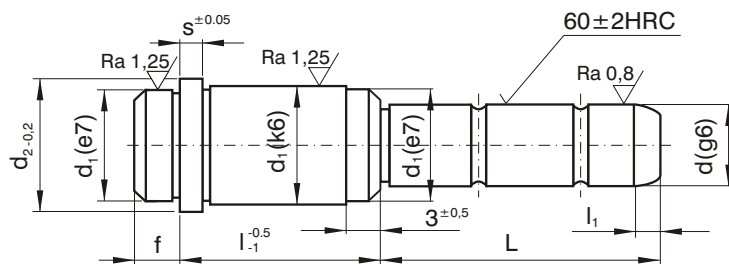



**SLE**

| d     | d <sub>1</sub> | d <sub>2</sub> | s | f | l <sub>1</sub> | l   | L   | NR KAT.      | NR KAT.      |
|-------|----------------|----------------|---|---|----------------|-----|-----|--------------|--------------|
| 18/20 | 26             | 31             | 6 | 9 | 7              | 46  | 35  | SLE-18046035 | SLE-20046035 |
|       |                |                |   |   |                |     | 45  | SLE-18046045 | SLE-20046045 |
|       |                |                |   |   |                |     | 65  | SLE-18046065 | SLE-20046065 |
|       |                |                |   |   |                |     | 85  | SLE-18046085 | SLE-20046085 |
|       |                |                |   |   |                |     | 105 | SLE-18046105 | SLE-20046105 |
|       |                |                |   |   |                |     | 135 | SLE-18046135 | SLE-20046135 |
|       |                |                |   |   |                |     | 165 | SLE-18046165 | SLE-20046165 |
|       |                |                |   |   |                |     | 245 | SLE-18046245 | SLE-20046245 |
|       |                |                |   |   |                | 56  | 35  | SLE-18056035 | SLE-20056035 |
|       |                |                |   |   |                |     | 55  | SLE-18056055 | SLE-20056055 |
|       |                |                |   |   |                |     | 75  | SLE-18056075 | SLE-20056075 |
|       |                |                |   |   |                |     | 95  | SLE-18056095 | SLE-20056095 |
|       |                |                |   |   |                | 66  | 155 | SLE-18056155 | SLE-20056155 |
|       |                |                |   |   |                |     | 35  | SLE-18066035 | SLE-20066035 |
|       |                |                |   |   |                |     | 55  | SLE-18066055 | SLE-20066055 |
|       |                |                |   |   |                |     | 75  | SLE-18066075 | SLE-20066075 |
|       |                |                |   |   |                |     | 95  | SLE-18066095 | SLE-20066095 |
|       |                |                |   |   |                | 76  | 145 | SLE-18066145 | SLE-20066145 |
|       |                |                |   |   |                |     | 55  | SLE-18076055 | SLE-20076055 |
|       |                |                |   |   |                |     | 75  | SLE-18076075 | SLE-20076075 |
|       |                |                |   |   |                |     | 95  | SLE-18076095 | SLE-20076095 |
|       |                |                |   |   |                | 86  | 135 | SLE-18076135 | SLE-20076135 |
|       |                |                |   |   |                |     | 55  | SLE-18086055 | SLE-20086055 |
|       |                |                |   |   |                |     | 75  | SLE-18086075 | SLE-20086075 |
|       |                |                |   |   |                |     | 95  | SLE-18086095 | SLE-20086095 |
|       |                |                |   |   |                | 96  | 125 | SLE-18086125 | SLE-20086125 |
|       |                |                |   |   |                |     | 55  | SLE-18096055 | SLE-20096055 |
|       |                |                |   |   |                |     | 95  | SLE-18096095 | SLE-20096095 |
|       |                |                |   |   |                | 116 | 75  | SLE-18116075 | SLE-20116075 |
|       |                |                |   |   |                |     | 115 | SLE-18116115 | SLE-20116115 |
|       |                |                |   |   |                |     | 136 | SLE-18136135 | SLE-20136135 |
| 22/24 | 30             | 35             | 6 | 9 | 7              | 17  | 35  | SLE-22017035 | SLE-24017035 |
|       |                |                |   |   |                |     | 55  | SLE-22017055 | SLE-24017055 |
|       |                |                |   |   |                |     | 75  | SLE-22017075 | SLE-24017075 |
|       |                |                |   |   |                | 22  | 35  | SLE-22022035 | SLE-24022035 |
|       |                |                |   |   |                |     | 55  | SLE-22022055 | SLE-24022055 |
|       |                |                |   |   |                |     | 75  | SLE-22022075 | SLE-24022075 |
|       |                |                |   |   |                |     | 105 | SLE-22022105 | SLE-24022105 |
|       |                |                |   |   |                | 27  | 130 | SLE-22022130 | SLE-24022130 |
|       |                |                |   |   |                |     | 35  | SLE-22027035 | SLE-24027035 |
|       |                |                |   |   |                |     | 45  | SLE-22027045 | SLE-24027045 |
|       |                |                |   |   |                |     | 65  | SLE-22027065 | SLE-24027065 |
|       |                |                |   |   |                |     | 85  | SLE-22027085 | SLE-24027085 |
|       |                |                |   |   |                |     | 105 | SLE-22027105 | SLE-24027105 |
|       |                |                |   |   |                |     | 125 | SLE-22027125 | SLE-24027125 |
|       |                |                |   |   |                |     | 165 | SLE-22027165 | SLE-24027165 |
|       |                |                |   |   |                |     | 205 | SLE-22027205 | SLE-24027205 |
|       |                |                |   |   |                |     | 245 | SLE-22027245 | SLE-24027245 |
|       |                |                |   |   |                |     | 285 | SLE-22027285 | SLE-24027285 |
|       |                |                |   |   |                | 36  | 35  | SLE-22036035 | SLE-24036035 |
|       |                |                |   |   |                |     | 55  | SLE-22036055 | SLE-24036055 |
|       |                |                |   |   |                |     | 75  | SLE-22036075 | SLE-24036075 |

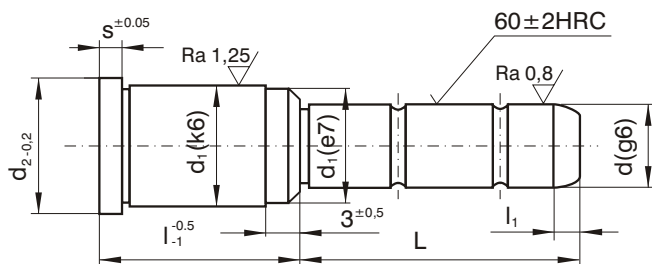
| d     | d <sub>1</sub> | d <sub>2</sub> | s            | f            | l <sub>1</sub> | l   | L   | NR KAT.      | NR KAT.      |
|-------|----------------|----------------|--------------|--------------|----------------|-----|-----|--------------|--------------|
| 22/24 | 30             | 35             | 6            | 9            | 7              | 36  | 95  | SLE-22036095 | SLE-24036095 |
|       |                |                |              |              |                |     | 115 | SLE-22036115 | SLE-24036115 |
|       |                |                |              |              |                |     | 135 | SLE-22036135 | SLE-24036135 |
|       |                |                |              |              |                |     | 165 | SLE-22036165 | SLE-24036165 |
|       |                |                |              |              |                |     | 205 | SLE-22036205 | SLE-24036205 |
|       |                |                |              |              |                |     | 245 | SLE-22036245 | SLE-24036245 |
|       |                |                |              |              |                |     | 285 | SLE-22036285 | SLE-24036285 |
|       |                |                |              |              |                | 46  | 35  | SLE-22046035 | SLE-24046035 |
|       |                |                |              |              |                |     | 45  | SLE-22046045 | SLE-24046045 |
|       |                |                |              |              |                |     | 65  | SLE-22046065 | SLE-24046065 |
|       |                |                |              |              |                |     | 85  | SLE-22046085 | SLE-24046085 |
|       |                |                |              |              |                |     | 105 | SLE-22046105 | SLE-24046105 |
|       |                |                |              |              |                |     | 125 | SLE-22046125 | SLE-24046125 |
|       |                |                |              |              |                |     | 165 | SLE-22046165 | SLE-24046165 |
|       |                |                |              |              |                | 56  | 205 | SLE-22046205 | SLE-24046205 |
|       |                |                |              |              |                |     | 35  | SLE-22056035 | SLE-24056035 |
|       |                |                |              |              |                |     | 55  | SLE-22056055 | SLE-24056055 |
|       |                |                |              |              |                |     | 75  | SLE-22056075 | SLE-24056075 |
|       |                |                |              |              |                |     | 95  | SLE-22056095 | SLE-24056095 |
|       |                |                |              |              |                |     | 115 | SLE-22056115 | SLE-24056115 |
|       |                |                |              |              |                |     | 165 | SLE-22056165 | SLE-24056165 |
|       |                |                |              |              |                | 66  | 205 | SLE-22056205 | SLE-24056205 |
|       |                |                |              |              |                |     | 35  | SLE-22066035 | SLE-24066035 |
|       |                |                |              |              |                |     | 55  | SLE-22066055 | SLE-24066055 |
|       |                |                |              |              |                |     | 75  | SLE-22066075 | SLE-24066075 |
|       |                |                |              |              |                | 76  | 95  | SLE-22066095 | SLE-24066095 |
|       |                |                |              |              |                |     | 155 | SLE-22066155 | SLE-24066155 |
|       |                |                |              |              |                |     | 55  | SLE-22076055 | SLE-24076055 |
|       |                |                |              |              |                |     | 75  | SLE-22076075 | SLE-24076075 |
|       |                |                |              |              |                | 86  | 95  | SLE-22076095 | SLE-24076095 |
|       |                |                |              |              |                |     | 115 | SLE-22076115 | SLE-24076115 |
|       |                |                |              |              |                |     | 145 | SLE-22076145 | SLE-24076145 |
|       |                |                |              |              |                |     | 55  | SLE-22086055 | SLE-24086055 |
|       |                |                |              |              |                | 96  | 75  | SLE-22086075 | SLE-24086075 |
|       |                |                |              |              |                |     | 95  | SLE-22086095 | SLE-24086095 |
|       |                |                |              |              |                |     | 135 | SLE-22086135 | SLE-24086135 |
|       |                |                |              |              |                |     | 55  | SLE-22096055 | SLE-24096055 |
|       |                |                |              |              |                | 116 | 75  | SLE-22096075 | SLE-24096075 |
|       |                |                |              |              |                |     | 95  | SLE-22096095 | SLE-24096095 |
|       |                |                |              |              |                |     | 125 | SLE-22096125 | SLE-24096125 |
|       |                |                |              |              |                |     | 75  | SLE-22116075 | SLE-24116075 |
|       |                |                |              |              |                | 136 | 115 | SLE-22116115 | SLE-24116115 |
|       |                |                |              |              |                |     | 155 | SLE-22116155 | SLE-24116155 |
|       |                |                |              |              |                |     | 95  | SLE-22136095 | SLE-24136095 |
|       |                |                |              |              |                | 156 | 135 | SLE-22136135 | SLE-24136135 |
|       |                |                |              |              |                |     | 155 | SLE-22156155 | SLE-24156155 |
| 22    | 35             | SLE-30022035   | SLE-32022035 |              |                |     |     |              |              |
|       | 75             | SLE-30022075   | SLE-32022075 |              |                |     |     |              |              |
|       | 130            | SLE-30022130   | SLE-32022130 |              |                |     |     |              |              |
|       | 27             | 45             | SLE-30027045 | SLE-32027045 |                |     |     |              |              |
|       |                | 65             | SLE-30027065 | SLE-32027065 |                |     |     |              |              |
| 105   |                | SLE-30027105   | SLE-32027105 |              |                |     |     |              |              |
| 30/32 | 42             | 47             | 6            | 9            | 7              | 22  | 35  | SLE-30022035 | SLE-32022035 |
|       |                |                |              |              |                |     | 75  | SLE-30022075 | SLE-32022075 |
|       |                |                |              |              |                |     | 130 | SLE-30022130 | SLE-32022130 |
|       |                |                |              |              |                |     | 45  | SLE-30027045 | SLE-32027045 |
|       |                |                |              |              |                |     | 65  | SLE-30027065 | SLE-32027065 |




**SLE**

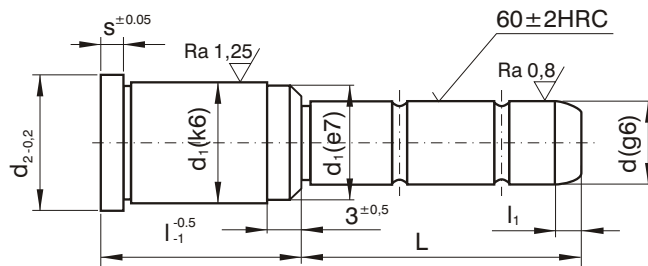
| d     | d <sub>1</sub> | d <sub>2</sub> | s | f | l <sub>1</sub> | I  | L   | NR KAT.      | NR KAT.      |
|-------|----------------|----------------|---|---|----------------|----|-----|--------------|--------------|
| 30/32 | 42             | 47             | 6 | 9 | 7              | 27 | 165 | SLE-30027165 | SLE-32027165 |
|       |                |                |   |   |                |    | 185 | SLE-30027185 | SLE-32027185 |
|       |                |                |   |   |                |    | 245 | SLE-30027245 | SLE-32027245 |
|       |                |                |   |   |                |    | 285 | SLE-30027285 | SLE-32027285 |
|       |                |                |   |   |                | 36 | 55  | SLE-30036055 | SLE-32036055 |
|       |                |                |   |   |                |    | 75  | SLE-30036075 | SLE-32036075 |
|       |                |                |   |   |                |    | 95  | SLE-30036095 | SLE-32036095 |
|       |                |                |   |   |                |    | 115 | SLE-30036115 | SLE-32036115 |
|       |                |                |   |   |                |    | 155 | SLE-30036155 | SLE-32036155 |
|       |                |                |   |   |                |    | 245 | SLE-30036245 | SLE-32036245 |
|       |                |                |   |   |                |    | 285 | SLE-30036285 | SLE-32036285 |
|       |                |                |   |   |                | 46 | 45  | SLE-30046045 | SLE-32046045 |
|       |                |                |   |   |                |    | 65  | SLE-30046065 | SLE-32046065 |
|       |                |                |   |   |                |    | 85  | SLE-30046085 | SLE-32046085 |
|       |                |                |   |   |                |    | 105 | SLE-30046105 | SLE-32046105 |
|       |                |                |   |   |                |    | 125 | SLE-30046125 | SLE-32046125 |
|       |                |                |   |   |                |    | 165 | SLE-30046165 | SLE-32046165 |
|       |                |                |   |   |                |    | 245 | SLE-30046245 | SLE-32046245 |
|       |                |                |   |   |                |    | 285 | SLE-30046285 | SLE-32046285 |
|       |                |                |   |   |                | 56 | 55  | SLE-30056055 | SLE-32056055 |
|       |                |                |   |   |                |    | 75  | SLE-30056075 | SLE-32056075 |
|       |                |                |   |   |                |    | 95  | SLE-30056095 | SLE-32056095 |
|       |                |                |   |   |                |    | 115 | SLE-30056115 | SLE-32056115 |
|       |                |                |   |   |                |    | 135 | SLE-30056135 | SLE-32056135 |
|       |                |                |   |   |                |    | 175 | SLE-30056175 | SLE-32056175 |
|       |                |                |   |   |                |    | 245 | SLE-30056245 | SLE-32056245 |
|       |                |                |   |   |                |    | 295 | SLE-30056295 | SLE-32056295 |
|       |                |                |   |   |                | 66 | 55  | SLE-30066055 | SLE-32066055 |
|       |                |                |   |   |                |    | 75  | SLE-30066075 | SLE-32066075 |
|       |                |                |   |   |                |    | 95  | SLE-30066095 | SLE-32066095 |
|       |                |                |   |   |                |    | 115 | SLE-30066115 | SLE-32066115 |
|       |                |                |   |   |                |    | 135 | SLE-30066135 | SLE-32066135 |
|       |                |                |   |   |                |    | 175 | SLE-30066175 | SLE-32066175 |
|       |                |                |   |   |                |    | 245 | SLE-30066245 | SLE-32066245 |
|       |                |                |   |   |                |    | 295 | SLE-30066295 | SLE-32066295 |
|       |                |                |   |   |                | 76 | 55  | SLE-30076055 | SLE-32076055 |
|       |                |                |   |   |                |    | 75  | SLE-30076075 | SLE-32076075 |
|       |                |                |   |   |                |    | 95  | SLE-30076095 | SLE-32076095 |
|       |                |                |   |   |                |    | 115 | SLE-30076115 | SLE-32076115 |
|       |                |                |   |   |                |    | 155 | SLE-30076155 | SLE-32076155 |
|       |                |                |   |   |                |    | 225 | SLE-30076225 | SLE-32076225 |
|       |                |                |   |   |                | 86 | 55  | SLE-30086055 | SLE-32086055 |
|       |                |                |   |   |                |    | 75  | SLE-30086075 | SLE-32086075 |
|       |                |                |   |   |                |    | 95  | SLE-30086095 | SLE-32086095 |
|       |                |                |   |   |                |    | 115 | SLE-30086115 | SLE-32086115 |
|       |                |                |   |   |                |    | 155 | SLE-30086155 | SLE-32086155 |
|       |                |                |   |   |                |    | 225 | SLE-30086225 | SLE-32086225 |
|       |                |                |   |   |                | 96 | 55  | SLE-30096055 | SLE-32096055 |
|       |                |                |   |   |                |    | 75  | SLE-30096075 | SLE-32096075 |
|       |                |                |   |   |                |    | 95  | SLE-30096095 | SLE-32096095 |

| d     | d <sub>1</sub> | d <sub>2</sub> | s            | f | l <sub>1</sub> | I     | L   | NR KAT.      | NR KAT.      |
|-------|----------------|----------------|--------------|---|----------------|-------|-----|--------------|--------------|
| 30/32 | 42             | 47             | 6            | 9 | 7              | 96    | 115 | SLE-30096115 | SLE-32096115 |
|       |                |                |              |   |                |       | 155 | SLE-30096155 | SLE-32096155 |
|       |                |                |              |   |                |       | 205 | SLE-30096205 | SLE-32096205 |
|       |                |                |              |   |                | 116   | 75  | SLE-30116075 | SLE-32116075 |
|       |                |                |              |   |                |       | 115 | SLE-30116115 | SLE-32116115 |
|       |                |                |              |   |                |       | 155 | SLE-30116155 | SLE-32116155 |
|       |                |                |              |   |                | 136   | 95  | SLE-30136095 | SLE-32136095 |
|       |                |                |              |   |                |       | 115 | SLE-30136115 | SLE-32136115 |
|       |                |                |              |   |                |       | 155 | SLE-30136155 | SLE-32136155 |
|       |                |                |              |   |                | 156   | 115 | SLE-30156115 | SLE-32156115 |
|       |                |                |              |   |                |       | 155 | SLE-30156155 | SLE-32156155 |
|       |                |                |              |   |                | 176   | 135 | SLE-30176135 | SLE-32176135 |
|       |                |                |              |   |                |       | 175 | SLE-30176175 | SLE-32176175 |
|       |                |                |              |   |                | 196   | 155 | SLE-30196155 | SLE-32196155 |
|       |                |                |              |   |                |       | 195 | SLE-30196195 | SLE-32196195 |
|       |                |                |              |   |                | 40/42 | 54  | 60           | 10           |
| 135   | SLE-40036135   | SLE-42036135   |              |   |                |       |     |              |              |
| 46    | 95             | SLE-40046095   | SLE-42046095 |   |                |       |     |              |              |
|       | 165            | SLE-40046165   | SLE-42046165 |   |                |       |     |              |              |
| 56    | 75             | SLE-40056075   | SLE-42056075 |   |                |       |     |              |              |
|       | 115            | SLE-40056115   | SLE-42056115 |   |                |       |     |              |              |
|       | 155            | SLE-40056155   | SLE-42056155 |   |                |       |     |              |              |
|       | 195            | SLE-40056195   | SLE-42056195 |   |                |       |     |              |              |
| 66    | 75             | SLE-40066075   | SLE-42066075 |   |                |       |     |              |              |
|       | 135            | SLE-40066135   | SLE-42066135 |   |                |       |     |              |              |
| 76    | 75             | SLE-40076075   | SLE-42076075 |   |                |       |     |              |              |
|       | 115            | SLE-40076115   | SLE-42076115 |   |                |       |     |              |              |
|       | 175            | SLE-40076175   | SLE-42076175 |   |                |       |     |              |              |
| 86    | 75             | SLE-40086075   | SLE-42086075 |   |                |       |     |              |              |
|       | 135            | SLE-40086135   | SLE-42086135 |   |                |       |     |              |              |
| 96    | 75             | SLE-40096075   | SLE-42096075 |   |                |       |     |              |              |
|       | 115            | SLE-40096115   | SLE-42096115 |   |                |       |     |              |              |
|       | 155            | SLE-40096155   | SLE-42096155 |   |                |       |     |              |              |
| 116   | 95             | SLE-40116095   | SLE-42116095 |   |                |       |     |              |              |
|       | 135            | SLE-40116135   | SLE-42116135 |   |                |       |     |              |              |
|       | 195            | SLE-40116195   | SLE-42116195 |   |                |       |     |              |              |
| 136   | 95             | SLE-40136095   | SLE-42136095 |   |                |       |     |              |              |
|       | 135            | SLE-40136135   | SLE-42136135 |   |                |       |     |              |              |
|       | 215            | SLE-40136215   | SLE-42136215 |   |                |       |     |              |              |
| 156   | 115            | SLE-40156115   | SLE-42156115 |   |                |       |     |              |              |
|       | 155            | SLE-40156155   | SLE-42156155 |   |                |       |     |              |              |
|       | 215            | SLE-40156215   | SLE-42156215 |   |                |       |     |              |              |
| 176   | 135            | SLE-40176135   | SLE-42176135 |   |                |       |     |              |              |
|       | 155            | SLE-40176155   | SLE-42176155 |   |                |       |     |              |              |
|       | 175            | SLE-40176175   | SLE-42176175 |   |                |       |     |              |              |
| 196   | 155            | SLE-40196155   | SLE-42196155 |   |                |       |     |              |              |
|       | 195            | SLE-40196195   | SLE-42196195 |   |                |       |     |              |              |
|       | 235            | SLE-40196235   | SLE-42196235 |   |                |       |     |              |              |
| 246   | 165            | SLE-40246165   | SLE-42246165 |   |                |       |     |              |              |
|       | 245            | SLE-40246245   | SLE-42246245 |   |                |       |     |              |              |


**SXE**

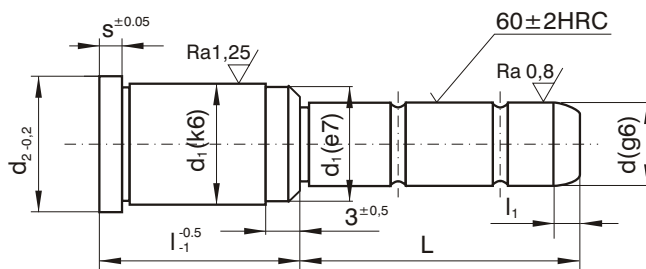
| d     | d <sub>1</sub> | d <sub>2</sub> | s | l <sub>1</sub> | l  | L   | NR KAT.      | NR KAT.      |
|-------|----------------|----------------|---|----------------|----|-----|--------------|--------------|
| 9/10  | 14             | 16             | 3 | 4              | 9  | 20  | SXE-09009020 | SXE-10009020 |
|       |                |                |   |                |    | 35  | SXE-09009035 | SXE-10009035 |
|       |                |                |   |                |    | 50  | SXE-09009050 | SXE-10009050 |
|       |                |                |   |                | 12 | 25  | SXE-09012025 | SXE-10012025 |
|       |                |                |   |                |    | 45  | SXE-09012045 | SXE-10012045 |
|       |                |                |   |                |    | 65  | SXE-09012065 | SXE-10012065 |
|       |                |                |   |                | 17 | 20  | SXE-09017020 | SXE-10017020 |
|       |                |                |   |                |    | 30  | SXE-09017030 | SXE-10017030 |
|       |                |                |   |                |    | 22  | SXE-09022025 | SXE-10022025 |
|       |                |                |   |                | 22 | 35  | SXE-09022035 | SXE-10022035 |
|       |                |                |   |                |    | 55  | SXE-09022055 | SXE-10022055 |
|       |                |                |   |                |    | 27  | SXE-09027030 | SXE-10027030 |
|       |                |                |   |                | 36 | 30  | SXE-09036025 | SXE-10036025 |
|       |                |                |   |                |    | 45  | SXE-09036045 | SXE-10036045 |
|       |                |                |   |                |    | 46  | SXE-09046030 | SXE-10046030 |
|       |                |                |   |                | 56 | 45  | SXE-09046045 | SXE-10046045 |
|       |                |                |   |                |    | 35  | SXE-09056035 | SXE-10056035 |
|       |                |                |   |                |    | 60  | SXE-09056060 | SXE-10056060 |
| 14/15 | 20             | 25             | 6 | 7              | 17 | 35  | SXE-14017035 | SXE-15017035 |
|       |                |                |   |                |    | 55  | SXE-14017055 | SXE-15017055 |
|       |                |                |   |                |    | 75  | SXE-14017075 | SXE-15017075 |
|       |                |                |   |                |    | 95  | SXE-14017095 | SXE-15017095 |
|       |                |                |   |                | 22 | 20  | SXE-14022020 | SXE-15022020 |
|       |                |                |   |                |    | 35  | SXE-14022035 | SXE-15022035 |
|       |                |                |   |                |    | 40  | SXE-14022040 | SXE-15022040 |
|       |                |                |   |                |    | 45  | SXE-14022045 | SXE-15022045 |
|       |                |                |   |                |    | 50  | SXE-14022050 | SXE-15022050 |
|       |                |                |   |                |    | 55  | SXE-14022055 | SXE-15022055 |
|       |                |                |   |                |    | 65  | SXE-14022065 | SXE-15022065 |
|       |                |                |   |                |    | 70  | SXE-14022070 | SXE-15022070 |
|       |                |                |   |                |    | 90  | SXE-14022090 | SXE-15022090 |
|       |                |                |   |                |    | 110 | SXE-14022110 | SXE-15022110 |
|       |                |                |   |                | 27 | 20  | SXE-14027020 | SXE-15027020 |
|       |                |                |   |                |    | 35  | SXE-14027035 | SXE-15027035 |
|       |                |                |   |                |    | 40  | SXE-14027040 | SXE-15027040 |
|       |                |                |   |                |    | 45  | SXE-14027045 | SXE-15027045 |
|       |                |                |   |                |    | 55  | SXE-14027055 | SXE-15027055 |
|       |                |                |   |                |    | 65  | SXE-14027065 | SXE-15027065 |
|       |                |                |   |                |    | 85  | SXE-14027085 | SXE-15027085 |
|       |                |                |   |                |    | 105 | SXE-14027105 | SXE-15027105 |
|       |                |                |   |                | 36 | 20  | SXE-14036020 | SXE-15036020 |
|       |                |                |   |                |    | 35  | SXE-14036035 | SXE-15036035 |
|       |                |                |   |                |    | 40  | SXE-14036040 | SXE-15036040 |
|       |                |                |   |                |    | 45  | SXE-14036045 | SXE-15036045 |
|       |                |                |   |                |    | 55  | SXE-14036055 | SXE-15036055 |
|       |                |                |   |                |    | 65  | SXE-14036065 | SXE-15036065 |
|       |                |                |   |                |    | 75  | SXE-14036075 | SXE-15036075 |
|       |                |                |   |                |    | 95  | SXE-14036095 | SXE-15036095 |
|       |                |                |   |                | 46 | 20  | SXE-14046020 | SXE-15046020 |

| d     | d <sub>1</sub> | d <sub>2</sub> | s | l <sub>1</sub> | l  | L   | NR KAT.      | NR KAT.      |
|-------|----------------|----------------|---|----------------|----|-----|--------------|--------------|
| 14/15 | 20             | 25             | 6 | 7              | 46 | 35  | SXE-14046035 | SXE-15046035 |
|       |                |                |   |                |    | 45  | SXE-14046045 | SXE-15046045 |
|       |                |                |   |                |    | 65  | SXE-14046065 | SXE-15046065 |
|       |                |                |   |                |    | 85  | SXE-14046085 | SXE-15046085 |
|       |                |                |   |                |    | 105 | SXE-14046105 | SXE-15046105 |
|       |                |                |   |                | 56 | 20  | SXE-14056020 | SXE-15056020 |
|       |                |                |   |                |    | 35  | SXE-14056035 | SXE-15056035 |
|       |                |                |   |                |    | 55  | SXE-14056055 | SXE-15056055 |
|       |                |                |   |                |    | 75  | SXE-14056075 | SXE-15056075 |
|       |                |                |   |                |    | 95  | SXE-14056095 | SXE-15056095 |
|       |                |                |   |                | 66 | 55  | SXE-14066055 | SXE-15066055 |
|       |                |                |   |                |    | 65  | SXE-14066065 | SXE-15066065 |
|       |                |                |   |                |    | 95  | SXE-14066095 | SXE-15066095 |
|       |                |                |   |                | 76 | 55  | SXE-14076055 | SXE-15076055 |
|       |                |                |   |                |    | 95  | SXE-14076095 | SXE-15076095 |
|       |                |                |   |                | 86 | 55  | SXE-14086055 | SXE-15086055 |
|       |                |                |   |                |    | 95  | SXE-14086095 | SXE-15086095 |
| 18/20 | 26             | 31             | 6 | 7              | 17 | 35  | SXE-18017035 | SXE-20017035 |
|       |                |                |   |                |    | 55  | SXE-18017055 | SXE-20017055 |
|       |                |                |   |                |    | 75  | SXE-18017075 | SXE-20017075 |
|       |                |                |   |                |    | 95  | SXE-18017095 | SXE-20017095 |
|       |                |                |   |                | 22 | 20  | SXE-18022020 | SXE-20022020 |
|       |                |                |   |                |    | 35  | SXE-18022035 | SXE-20022035 |
|       |                |                |   |                |    | 40  | SXE-18022040 | SXE-20022040 |
|       |                |                |   |                |    | 45  | SXE-18022045 | SXE-20022045 |
|       |                |                |   |                |    | 50  | SXE-18022050 | SXE-20022050 |
|       |                |                |   |                |    | 55  | SXE-18022055 | SXE-20022055 |
|       |                |                |   |                |    | 60  | SXE-18022060 | SXE-20022060 |
|       |                |                |   |                |    | 65  | SXE-18022065 | SXE-20022065 |
|       |                |                |   |                |    | 70  | SXE-18022070 | SXE-20022070 |
|       |                |                |   |                |    | 80  | SXE-18022080 | SXE-20022080 |
|       |                |                |   |                | 27 | 85  | SXE-18022085 | SXE-20022085 |
|       |                |                |   |                |    | 115 | SXE-18022115 | SXE-20022115 |
|       |                |                |   |                |    | 20  | SXE-18027020 | SXE-20027020 |
|       |                |                |   |                |    | 35  | SXE-18027035 | SXE-20027035 |
|       |                |                |   |                |    | 40  | SXE-18027040 | SXE-20027040 |
|       |                |                |   |                |    | 45  | SXE-18027045 | SXE-20027045 |
|       |                |                |   |                |    | 50  | SXE-18027050 | SXE-20027050 |
|       |                |                |   |                |    | 55  | SXE-18027055 | SXE-20027055 |
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|       |                |                |   |                |    | 65  | SXE-18027065 | SXE-20027065 |
|       |                |                |   |                | 36 | 70  | SXE-18027070 | SXE-20027070 |
|       |                |                |   |                |    | 80  | SXE-18027080 | SXE-20027080 |
|       |                |                |   |                |    | 85  | SXE-18027085 | SXE-20027085 |
|       |                |                |   |                |    | 105 | SXE-18027105 | SXE-20027105 |
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**SXE**

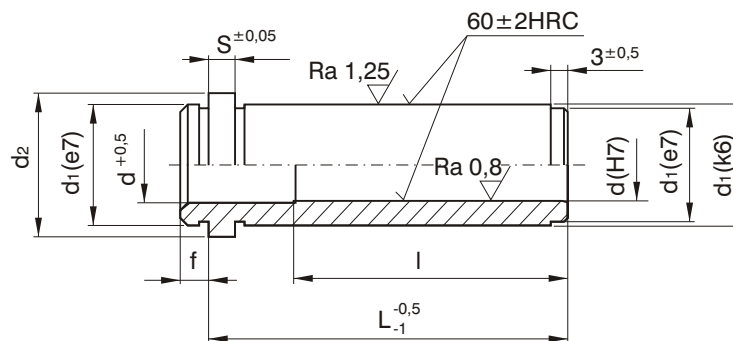
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|-------|----------------|----------------|---|----------------|-----|-----|--------------|--------------|
| 18/20 | 26             | 31             | 6 | 7              | 36  | 50  | SXE-18036050 | SXE-20036050 |
|       |                |                |   |                |     | 55  | SXE-18036055 | SXE-20036055 |
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|       |                |                |   |                | 46  | 20  | SXE-18046020 | SXE-20046020 |
|       |                |                |   |                |     | 45  | SXE-18046045 | SXE-20046045 |
|       |                |                |   |                |     | 65  | SXE-18046065 | SXE-20046065 |
|       |                |                |   |                |     | 85  | SXE-18046085 | SXE-20046085 |
|       |                |                |   |                |     | 105 | SXE-18046105 | SXE-20046105 |
|       |                |                |   |                |     | 135 | SXE-18046135 | SXE-20046135 |
|       |                |                |   |                | 56  | 20  | SXE-18056020 | SXE-20056020 |
|       |                |                |   |                |     | 35  | SXE-18056035 | SXE-20056035 |
|       |                |                |   |                |     | 55  | SXE-18056055 | SXE-20056055 |
|       |                |                |   |                |     | 75  | SXE-18056075 | SXE-20056075 |
|       |                |                |   |                | 66  | 55  | SXE-18066055 | SXE-20066055 |
|       |                |                |   |                |     | 75  | SXE-18066075 | SXE-20066075 |
|       |                |                |   |                |     | 95  | SXE-18066095 | SXE-20066095 |
|       |                |                |   |                | 76  | 55  | SXE-18076055 | SXE-20076055 |
|       |                |                |   |                |     | 75  | SXE-18076075 | SXE-20076075 |
|       |                |                |   |                |     | 95  | SXE-18076095 | SXE-20076095 |
|       |                |                |   |                | 86  | 55  | SXE-18086055 | SXE-20086055 |
|       |                |                |   |                |     | 75  | SXE-18086075 | SXE-20086075 |
|       |                |                |   |                |     | 95  | SXE-18086095 | SXE-20086095 |
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|       |                |                |   |                |     | 95  | SXE-18096095 | SXE-20096095 |
|       |                |                |   |                | 116 | 115 | SXE-18116115 | SXE-20116115 |
| 22/24 | 30             | 35             | 6 | 7              | 17  | 35  | SXE-22017035 | SXE-24017035 |
|       |                |                |   |                |     | 55  | SXE-22017055 | SXE-24017055 |
|       |                |                |   |                |     | 75  | SXE-22017075 | SXE-24017075 |
|       |                |                |   |                |     | 105 | SXE-22017105 | SXE-24017105 |
|       |                |                |   |                | 22  | 35  | SXE-22022035 | SXE-24022035 |
|       |                |                |   |                |     | 55  | SXE-22022055 | SXE-24022055 |
|       |                |                |   |                |     | 75  | SXE-22022075 | SXE-24022075 |
|       |                |                |   |                |     | 105 | SXE-22022105 | SXE-24022105 |
|       |                |                |   |                |     | 130 | SXE-22022130 | SXE-24022130 |
|       |                |                |   |                | 27  | 25  | SXE-22027025 | SXE-24027025 |
|       |                |                |   |                |     | 45  | SXE-22027045 | SXE-24027045 |
|       |                |                |   |                |     | 50  | SXE-22027050 | SXE-24027050 |
|       |                |                |   |                |     | 60  | SXE-22027060 | SXE-24027060 |
|       |                |                |   |                |     | 65  | SXE-22027065 | SXE-24027065 |
|       |                |                |   |                |     | 70  | SXE-22027070 | SXE-24027070 |
|       |                |                |   |                |     | 80  | SXE-22027080 | SXE-24027080 |
|       |                |                |   |                |     | 85  | SXE-22027085 | SXE-24027085 |

| d     | d <sub>1</sub> | d <sub>2</sub> | s | l <sub>1</sub> | I  | L   | NR KAT.      | NR KAT.      |
|-------|----------------|----------------|---|----------------|----|-----|--------------|--------------|
| 22/24 | 30             | 35             | 6 | 7              | 27 | 105 | SXE-22027105 | SXE-24027105 |
|       |                |                |   |                |    | 125 | SXE-22027125 | SXE-24027125 |
|       |                |                |   |                |    | 165 | SXE-22027165 | SXE-24027165 |
|       |                |                |   |                | 36 | 25  | SXE-22036025 | SXE-24036025 |
|       |                |                |   |                |    | 45  | SXE-22036045 | SXE-24036045 |
|       |                |                |   |                |    | 50  | SXE-22036050 | SXE-24036050 |
|       |                |                |   |                |    | 55  | SXE-22036055 | SXE-24036055 |
|       |                |                |   |                |    | 60  | SXE-22036060 | SXE-24036060 |
|       |                |                |   |                |    | 70  | SXE-22036070 | SXE-24036070 |
|       |                |                |   |                |    | 75  | SXE-22036075 | SXE-24036075 |
|       |                |                |   |                |    | 80  | SXE-22036080 | SXE-24036080 |
|       |                |                |   |                |    | 95  | SXE-22036095 | SXE-24036095 |
|       |                |                |   |                |    | 115 | SXE-22036115 | SXE-24036115 |
|       |                |                |   |                |    | 135 | SXE-22036135 | SXE-24036135 |
|       |                |                |   |                | 46 | 165 | SXE-22036165 | SXE-24036165 |
|       |                |                |   |                |    | 25  | SXE-22046025 | SXE-24046025 |
|       |                |                |   |                |    | 45  | SXE-22046045 | SXE-24046045 |
|       |                |                |   |                |    | 50  | SXE-22046050 | SXE-24046050 |
|       |                |                |   |                |    | 60  | SXE-22046060 | SXE-24046060 |
|       |                |                |   |                |    | 65  | SXE-22046065 | SXE-24046065 |
|       |                |                |   |                |    | 70  | SXE-22046070 | SXE-24046070 |
|       |                |                |   |                |    | 80  | SXE-22046080 | SXE-24046080 |
|       |                |                |   |                |    | 85  | SXE-22046085 | SXE-24046085 |
|       |                |                |   |                |    | 105 | SXE-22046105 | SXE-24046105 |
|       |                |                |   |                |    | 125 | SXE-22046125 | SXE-24046125 |
|       |                |                |   |                |    | 165 | SXE-22046165 | SXE-24046165 |
|       |                |                |   |                | 56 | 25  | SXE-22056025 | SXE-24056025 |
|       |                |                |   |                |    | 45  | SXE-22056045 | SXE-24056045 |
|       |                |                |   |                |    | 55  | SXE-22056055 | SXE-24056055 |
|       |                |                |   |                |    | 75  | SXE-22056075 | SXE-24056075 |
|       |                |                |   |                |    | 95  | SXE-22056095 | SXE-24056095 |
|       |                |                |   |                |    | 115 | SXE-22056115 | SXE-24056115 |
|       |                |                |   |                |    | 165 | SXE-22056165 | SXE-24056165 |
|       |                |                |   |                | 66 | 55  | SXE-22066055 | SXE-24066055 |
|       |                |                |   |                |    | 75  | SXE-22066075 | SXE-24066075 |
|       |                |                |   |                |    | 95  | SXE-22066095 | SXE-24066095 |
|       |                |                |   |                |    | 115 | SXE-22066115 | SXE-24066115 |
|       |                |                |   |                | 76 | 25  | SXE-22076025 | SXE-24076025 |
|       |                |                |   |                |    | 45  | SXE-22076045 | SXE-24076045 |
|       |                |                |   |                |    | 55  | SXE-22076055 | SXE-24076055 |
|       |                |                |   |                |    | 75  | SXE-22076075 | SXE-24076075 |
|       |                |                |   |                |    | 95  | SXE-22076095 | SXE-24076095 |
|       |                |                |   |                |    | 115 | SXE-22076115 | SXE-24076115 |
|       |                |                |   |                |    | 135 | SXE-22076135 | SXE-24076135 |
|       |                |                |   |                |    | 165 | SXE-22076165 | SXE-24076165 |
|       |                |                |   |                | 86 | 55  | SXE-22086055 | SXE-24086055 |
|       |                |                |   |                |    | 75  | SXE-22086075 | SXE-24086075 |
|       |                |                |   |                |    | 95  | SXE-22086095 | SXE-24086095 |
|       |                |                |   |                |    | 115 | SXE-22086115 | SXE-24086115 |
|       |                |                |   |                | 96 | 55  | SXE-22096055 | SXE-24096055 |
|       |                |                |   |                |    | 75  | SXE-22096075 | SXE-24096075 |
|       |                |                |   |                |    | 95  | SXE-22096095 | SXE-24096095 |
|       |                |                |   |                |    | 115 | SXE-22096115 | SXE-24096115 |

**SXE**


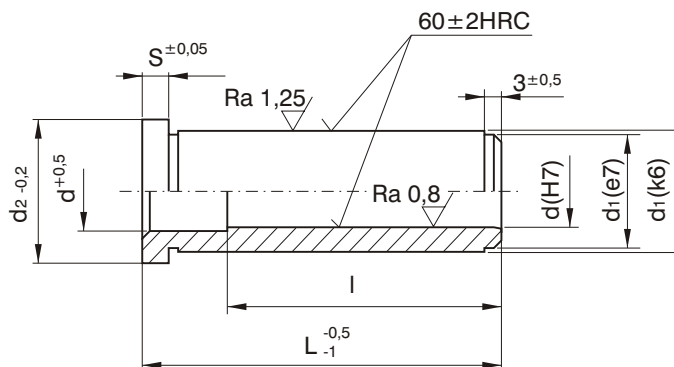
| d     | d <sub>1</sub> | d <sub>2</sub> | s | I <sub>1</sub> | I   | L   | NR KAT.      | NR KAT.      |
|-------|----------------|----------------|---|----------------|-----|-----|--------------|--------------|
| 22/24 | 30             | 35             | 6 | 7              | 116 | 155 | SXE-22116155 | SXE-24116155 |
|       |                |                |   |                | 136 | 135 | SXE-22136135 | SXE-24136135 |
|       |                |                |   |                | 156 | 155 | SXE-22156155 | SXE-24156155 |
| 30/32 | 42             | 47             | 6 | 7              | 22  | 35  | SXE-30022035 | SXE-32022035 |
|       |                |                |   |                |     | 75  | SXE-30022075 | SXE-32022075 |
|       |                |                |   |                |     | 130 | SXE-30022130 | SXE-32022130 |
|       |                |                |   |                | 27  | 45  | SXE-30027045 | SXE-32027045 |
|       |                |                |   |                |     | 65  | SXE-30027065 | SXE-32027065 |
|       |                |                |   |                |     | 105 | SXE-30027105 | SXE-32027105 |
|       |                |                |   |                |     | 165 | SXE-30027165 | SXE-32027165 |
|       |                |                |   |                | 36  | 55  | SXE-30036055 | SXE-32036055 |
|       |                |                |   |                |     | 75  | SXE-30036075 | SXE-32036075 |
|       |                |                |   |                |     | 95  | SXE-30036095 | SXE-32036095 |
|       |                |                |   |                |     | 115 | SXE-30036115 | SXE-32036115 |
|       |                |                |   |                |     | 155 | SXE-30036155 | SXE-32036155 |
|       |                |                |   |                | 46  | 45  | SXE-30046045 | SXE-32046045 |
|       |                |                |   |                |     | 65  | SXE-30046065 | SXE-32046065 |
|       |                |                |   |                |     | 85  | SXE-30046085 | SXE-32046085 |
|       |                |                |   |                |     | 105 | SXE-30046105 | SXE-32046105 |
|       |                |                |   |                |     | 125 | SXE-30046125 | SXE-32046125 |
|       |                |                |   |                |     | 165 | SXE-30046165 | SXE-32046165 |
|       |                |                |   |                | 56  | 55  | SXE-30056055 | SXE-32056055 |
|       |                |                |   |                |     | 75  | SXE-30056075 | SXE-32056075 |
|       |                |                |   |                |     | 95  | SXE-30056095 | SXE-32056095 |
|       |                |                |   |                |     | 115 | SXE-30056115 | SXE-32056115 |
|       |                |                |   |                |     | 135 | SXE-30056135 | SXE-32056135 |
|       |                |                |   |                |     | 175 | SXE-30056175 | SXE-32056175 |
|       |                |                |   |                | 66  | 55  | SXE-30066055 | SXE-32066055 |
|       |                |                |   |                |     | 75  | SXE-30066075 | SXE-32066075 |
|       |                |                |   |                |     | 95  | SXE-30066095 | SXE-32066095 |
|       |                |                |   |                |     | 115 | SXE-30066115 | SXE-32066115 |
|       |                |                |   |                |     | 135 | SXE-30066135 | SXE-32066135 |
|       |                |                |   |                | 76  | 55  | SXE-30076055 | SXE-32076055 |
|       |                |                |   |                |     | 75  | SXE-30076075 | SXE-32076075 |
|       |                |                |   |                |     | 95  | SXE-30076095 | SXE-32076095 |
|       |                |                |   |                |     | 115 | SXE-30076115 | SXE-32076115 |
|       |                |                |   |                |     | 155 | SXE-30076155 | SXE-32076155 |
|       |                |                |   |                | 86  | 55  | SXE-30086055 | SXE-32086055 |
|       |                |                |   |                |     | 75  | SXE-30086075 | SXE-32086075 |
|       |                |                |   |                |     | 95  | SXE-30086095 | SXE-32086095 |
|       |                |                |   |                |     | 115 | SXE-30086115 | SXE-32086115 |
|       |                |                |   |                |     | 155 | SXE-30086155 | SXE-32086155 |
|       |                |                |   |                | 96  | 55  | SXE-30096055 | SXE-32096055 |
|       |                |                |   |                |     | 75  | SXE-30096075 | SXE-32096075 |
|       |                |                |   |                |     | 95  | SXE-30096095 | SXE-32096095 |
|       |                |                |   |                |     | 115 | SXE-30096115 | SXE-32096115 |
|       |                |                |   |                |     | 155 | SXE-30096155 | SXE-32096155 |
|       |                |                |   |                | 116 | 75  | SXE-30116075 | SXE-32116075 |
|       |                |                |   |                |     | 115 | SXE-30116115 | SXE-32116115 |

| d     | d <sub>1</sub> | d <sub>2</sub> | s  | I <sub>1</sub> | I   | L   | NR KAT.      | NR KAT.      |
|-------|----------------|----------------|----|----------------|-----|-----|--------------|--------------|
| 30/32 | 42             | 47             | 6  | 7              | 116 | 155 | SXE-30116155 | SXE-32116155 |
|       |                |                |    |                | 136 | 95  | SXE-30136095 | SXE-32136095 |
|       |                |                |    |                |     | 115 | SXE-30136115 | SXE-32136115 |
|       |                |                |    |                |     | 155 | SXE-30136155 | SXE-32136155 |
|       |                |                |    |                | 156 | 115 | SXE-30156115 | SXE-32156115 |
|       |                |                |    |                |     | 155 | SXE-30156155 | SXE-32156155 |
|       |                |                |    |                | 176 | 135 | SXE-30176135 | SXE-32176135 |
|       |                |                |    |                |     | 175 | SXE-30176175 | SXE-32176175 |
|       |                |                |    |                | 196 | 155 | SXE-30196155 | SXE-32196155 |
|       |                |                |    |                |     | 195 | SXE-30196195 | SXE-32196195 |
| 40/42 | 54             | 60             | 10 | 7              | 36  | 75  | SXE-40036075 | SXE-42036075 |
|       |                |                |    |                |     | 135 | SXE-40036135 | SXE-42036135 |
|       |                |                |    |                | 46  | 95  | SXE-40046095 | SXE-42046095 |
|       |                |                |    |                |     | 165 | SXE-40046165 | SXE-42046165 |
|       |                |                |    |                | 56  | 75  | SXE-40056075 | SXE-42056075 |
|       |                |                |    |                |     | 115 | SXE-40056115 | SXE-42056115 |
|       |                |                |    |                |     | 155 | SXE-40056155 | SXE-42056155 |
|       |                |                |    |                |     | 195 | SXE-40056195 | SXE-42056195 |
|       |                |                |    |                | 66  | 75  | SXE-40066075 | SXE-42066075 |
|       |                |                |    |                |     | 135 | SXE-40066135 | SXE-42066135 |
|       |                |                |    |                | 76  | 75  | SXE-40076075 | SXE-42076075 |
|       |                |                |    |                |     | 115 | SXE-40076115 | SXE-42076115 |
|       |                |                |    |                |     | 175 | SXE-40076175 | SXE-42076175 |
|       |                |                |    |                | 86  | 75  | SXE-40086075 | SXE-42086075 |
|       |                |                |    |                |     | 135 | SXE-40086135 | SXE-42086135 |
|       |                |                |    |                | 96  | 75  | SXE-40096075 | SXE-42096075 |
|       |                |                |    |                |     | 115 | SXE-40096115 | SXE-42096115 |
|       |                |                |    |                |     | 155 | SXE-40096155 | SXE-42096155 |
|       |                |                |    |                | 116 | 95  | SXE-40116095 | SXE-42116095 |
|       |                |                |    |                |     | 135 | SXE-40116135 | SXE-42116135 |
|       |                |                |    |                |     | 195 | SXE-40116195 | SXE-42116195 |
|       |                |                |    |                | 136 | 95  | SXE-40136095 | SXE-42136095 |
|       |                |                |    |                |     | 135 | SXE-40136135 | SXE-42136135 |
|       |                |                |    |                |     | 215 | SXE-40136215 | SXE-42136215 |
|       |                |                |    |                | 156 | 115 | SXE-40156115 | SXE-42156115 |
|       |                |                |    |                |     | 155 | SXE-40156155 | SXE-42156155 |
|       |                |                |    |                |     | 215 | SXE-40156215 | SXE-42156215 |
|       |                |                |    |                | 176 | 135 | SXE-40176135 | SXE-42176135 |
|       |                |                |    |                |     | 155 | SXE-40176155 | SXE-42176155 |
|       |                |                |    |                |     | 175 | SXE-40176175 | SXE-42176175 |
|       |                |                |    |                | 196 | 155 | SXE-40196155 | SXE-42196155 |
|       |                |                |    |                |     | 195 | SXE-40196195 | SXE-42196195 |
|       |                |                |    |                |     | 235 | SXE-40196235 | SXE-42196235 |
|       |                |                |    |                |     |     |              |              |
|       |                |                |    |                |     |     |              |              |
|       |                |                |    |                |     |     |              |              |
|       |                |                |    |                |     |     |              |              |
|       |                |                |    |                |     |     |              |              |
|       |                |                |    |                |     |     |              |              |
|       |                |                |    |                |     |     |              |              |
|       |                |                |    |                |     |     |              |              |
|       |                |                |    |                |     |     |              |              |
|       |                |                |    |                |     |     |              |              |
|       |                |                |    |                |     |     |              |              |

**TPE**


| d     | d <sub>1</sub> | d <sub>2</sub> | s | f | l  | L   | NR KAT.   | NR KAT.   |
|-------|----------------|----------------|---|---|----|-----|-----------|-----------|
| 9/10  | 14             | 16             | 3 | 3 | 12 | 9   | TPE-09009 | TPE-10009 |
|       |                |                |   |   | 15 | 12  | TPE-09012 | TPE-10012 |
|       |                |                |   |   | 20 | 17  | TPE-09017 | TPE-10017 |
|       |                |                |   |   | 25 | 22  | TPE-09022 | TPE-10022 |
|       |                |                |   |   | 30 | 27  | TPE-09027 | TPE-10027 |
|       |                |                |   |   | 39 | 36  | TPE-09036 | TPE-10036 |
|       |                |                |   |   | 46 | 46  | TPE-09046 | TPE-10046 |
|       |                |                |   |   | 46 | 56  | TPE-09056 | TPE-10056 |
|       |                |                |   |   | 46 | 66  | TPE-09066 | TPE-10066 |
|       |                |                |   |   |    |     |           |           |
| 14/15 | 20             | 25             | 6 | 9 | 21 | 12  | TPE-14012 | TPE-15012 |
|       |                |                |   |   | 26 | 17  | TPE-14017 | TPE-15017 |
|       |                |                |   |   | 31 | 22  | TPE-14022 | TPE-15022 |
|       |                |                |   |   | 36 | 27  | TPE-14027 | TPE-15027 |
|       |                |                |   |   | 45 | 36  | TPE-14036 | TPE-15036 |
|       |                |                |   |   | 55 | 46  | TPE-14046 | TPE-15046 |
|       |                |                |   |   | 56 | 56  | TPE-14056 | TPE-15056 |
|       |                |                |   |   | 56 | 66  | TPE-14066 | TPE-15066 |
|       |                |                |   |   | 56 | 76  | TPE-14076 | TPE-15076 |
|       |                |                |   |   | 56 | 86  | TPE-14086 | TPE-15086 |
|       |                |                |   |   | 56 | 96  | TPE-14096 | TPE-15096 |
|       |                |                |   |   | 56 | 116 | TPE-14116 | TPE-15116 |
| 18/20 | 26             | 31             | 6 | 9 | 26 | 17  | TPE-18017 | TPE-20017 |
|       |                |                |   |   | 31 | 22  | TPE-18022 | TPE-20022 |
|       |                |                |   |   | 36 | 27  | TPE-18027 | TPE-20027 |
|       |                |                |   |   | 45 | 36  | TPE-18036 | TPE-20036 |
|       |                |                |   |   | 55 | 46  | TPE-18046 | TPE-20046 |
|       |                |                |   |   | 65 | 56  | TPE-18056 | TPE-20056 |
|       |                |                |   |   | 75 | 66  | TPE-18066 | TPE-20066 |
|       |                |                |   |   | 76 | 76  | TPE-18076 | TPE-20076 |
|       |                |                |   |   | 76 | 86  | TPE-18086 | TPE-20086 |
|       |                |                |   |   | 76 | 96  | TPE-18096 | TPE-20096 |
|       |                |                |   |   | 76 | 116 | TPE-18116 | TPE-20116 |
|       |                |                |   |   | 76 | 136 | TPE-18136 | TPE-20136 |
|       |                |                |   |   |    |     |           |           |
|       |                |                |   |   |    |     |           |           |
| 22/24 | 30             | 35             | 6 | 9 | 26 | 17  | TPE-22017 | TPE-24017 |
|       |                |                |   |   | 31 | 22  | TPE-22022 | TPE-24022 |
|       |                |                |   |   | 36 | 27  | TPE-22027 | TPE-24027 |
|       |                |                |   |   |    |     |           |           |

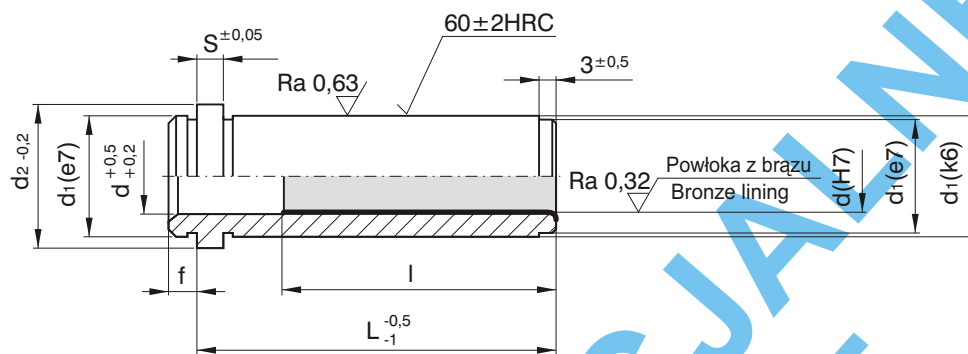
| d     | d <sub>1</sub> | d <sub>2</sub> | s  | f  | l   | L   | NR KAT.   | NR KAT.   |
|-------|----------------|----------------|----|----|-----|-----|-----------|-----------|
| 22/24 | 30             | 35             | 6  | 9  | 45  | 36  | TPE-22036 | TPE-24036 |
|       |                |                |    |    | 55  | 46  | TPE-22046 | TPE-24046 |
|       |                |                |    |    | 65  | 56  | TPE-22056 | TPE-24056 |
|       |                |                |    |    | 75  | 66  | TPE-22066 | TPE-24066 |
|       |                |                |    |    | 85  | 76  | TPE-22076 | TPE-24076 |
|       |                |                |    |    | 95  | 86  | TPE-22086 | TPE-24086 |
|       |                |                |    |    | 96  | 96  | TPE-22096 | TPE-24096 |
|       |                |                |    |    | 96  | 116 | TPE-22116 | TPE-24116 |
|       |                |                |    |    | 96  | 136 | TPE-22136 | TPE-24136 |
|       |                |                |    |    | 96  | 156 | TPE-22156 | TPE-24156 |
|       |                |                |    |    |     |     |           |           |
|       |                |                |    |    |     |     |           |           |
| 30/32 | 42             | 47             | 6  | 9  | 31  | 22  | TPE-30022 | TPE-32022 |
|       |                |                |    |    | 36  | 27  | TPE-30027 | TPE-32027 |
|       |                |                |    |    | 45  | 36  | TPE-30036 | TPE-32036 |
|       |                |                |    |    | 55  | 46  | TPE-30046 | TPE-32046 |
|       |                |                |    |    | 65  | 56  | TPE-30056 | TPE-32056 |
|       |                |                |    |    | 75  | 66  | TPE-30066 | TPE-32066 |
|       |                |                |    |    | 85  | 76  | TPE-30076 | TPE-32076 |
|       |                |                |    |    | 95  | 86  | TPE-30086 | TPE-32086 |
|       |                |                |    |    | 105 | 96  | TPE-30096 | TPE-32096 |
|       |                |                |    |    | 116 | 116 | TPE-30116 | TPE-32116 |
|       |                |                |    |    | 116 | 136 | TPE-30136 | TPE-32136 |
|       |                |                |    |    | 116 | 156 | TPE-30156 | TPE-32156 |
|       |                |                |    |    | 116 | 176 | TPE-30176 | TPE-32176 |
|       |                |                |    |    | 116 | 196 | TPE-30196 | TPE-32196 |
| 40/42 | 54             | 60             | 10 | 12 | 48  | 36  | TPE-40036 | TPE-42036 |
|       |                |                |    |    | 58  | 46  | TPE-40046 | TPE-42046 |
|       |                |                |    |    | 68  | 56  | TPE-40056 | TPE-42056 |
|       |                |                |    |    | 78  | 66  | TPE-40066 | TPE-42066 |
|       |                |                |    |    | 88  | 76  | TPE-40076 | TPE-42076 |
|       |                |                |    |    | 98  | 86  | TPE-40086 | TPE-42086 |
|       |                |                |    |    | 108 | 96  | TPE-40096 | TPE-42096 |
|       |                |                |    |    | 128 | 116 | TPE-40116 | TPE-42116 |
|       |                |                |    |    | 136 | 136 | TPE-40136 | TPE-42136 |
|       |                |                |    |    | 136 | 156 | TPE-40156 | TPE-42156 |
|       |                |                |    |    | 136 | 176 | TPE-40176 | TPE-42176 |
|       |                |                |    |    | 136 | 196 | TPE-40196 | TPE-42196 |
|       |                |                |    |    |     |     |           |           |
|       |                |                |    |    |     |     |           |           |

**TXE**


| d     | d <sub>1</sub> | d <sub>2</sub> | s | I  | L   | NR KAT.   | NR KAT.   |
|-------|----------------|----------------|---|----|-----|-----------|-----------|
| 9/10  | 14             | 16             | 3 | 9  | 9   | TXE-09009 | TXE-10009 |
|       |                |                |   | 12 | 12  | TXE-09012 | TXE-10012 |
|       |                |                |   | 17 | 17  | TXE-09017 | TXE-10017 |
|       |                |                |   | 22 | 22  | TXE-09022 | TXE-10022 |
|       |                |                |   | 27 | 27  | TXE-09027 | TXE-10027 |
|       |                |                |   | 36 | 36  | TXE-09036 | TXE-10036 |
|       |                |                |   | 46 | 46  | TXE-09046 | TXE-10046 |
|       |                |                |   | 46 | 56  | TXE-09056 | TXE-10056 |
|       |                |                |   | 46 | 66  | TXE-09066 | TXE-10066 |
| 14/15 | 20             | 25             | 6 | 12 | 12  | TXE-14012 | TXE-15012 |
|       |                |                |   | 17 | 17  | TXE-14017 | TXE-15017 |
|       |                |                |   | 22 | 22  | TXE-14022 | TXE-15022 |
|       |                |                |   | 27 | 27  | TXE-14027 | TXE-15027 |
|       |                |                |   | 36 | 36  | TXE-14036 | TXE-15036 |
|       |                |                |   | 46 | 46  | TXE-14046 | TXE-15046 |
|       |                |                |   | 56 | 56  | TXE-14056 | TXE-15056 |
|       |                |                |   | 56 | 66  | TXE-14066 | TXE-15066 |
|       |                |                |   | 56 | 76  | TXE-14076 | TXE-15076 |
|       |                |                |   | 56 | 86  | TXE-14086 | TXE-15086 |
| 18/20 | 26             | 31             | 6 | 56 | 96  | TXE-14096 | TXE-15096 |
|       |                |                |   | 17 | 17  | TXE-18017 | TXE-20017 |
|       |                |                |   | 22 | 22  | TXE-18022 | TXE-20022 |
|       |                |                |   | 27 | 27  | TXE-18027 | TXE-20027 |
|       |                |                |   | 36 | 36  | TXE-18036 | TXE-20036 |
|       |                |                |   | 46 | 46  | TXE-18046 | TXE-20046 |
|       |                |                |   | 56 | 56  | TXE-18056 | TXE-20056 |
|       |                |                |   | 66 | 66  | TXE-18066 | TXE-20066 |
|       |                |                |   | 76 | 76  | TXE-18076 | TXE-20076 |
|       |                |                |   | 76 | 86  | TXE-18086 | TXE-20086 |
| 22/24 | 30             | 35             | 6 | 76 | 96  | TXE-18096 | TXE-20096 |
|       |                |                |   | 76 | 116 | TXE-18116 | TXE-20116 |
|       |                |                |   | 17 | 17  | TXE-22017 | TXE-24017 |
|       |                |                |   | 22 | 22  | TXE-22022 | TXE-24022 |
|       |                |                |   | 27 | 27  | TXE-22027 | TXE-24027 |
|       |                |                |   | 36 | 36  | TXE-22036 | TXE-24036 |

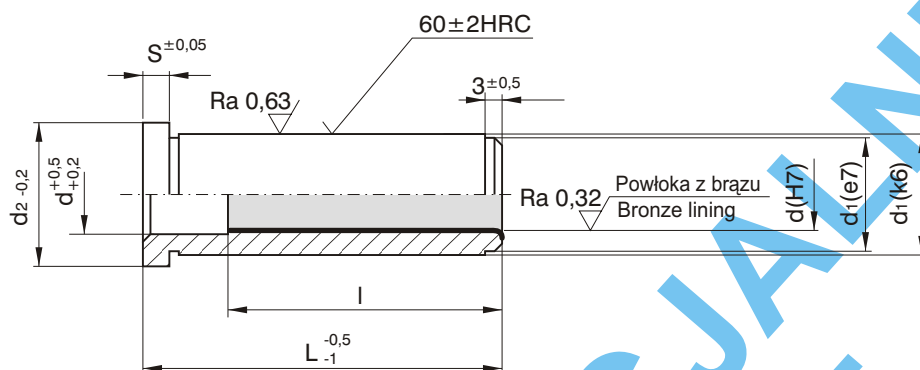
| d     | d <sub>1</sub> | d <sub>2</sub> | s  | I   | L   | NR KAT.   | NR KAT.   |
|-------|----------------|----------------|----|-----|-----|-----------|-----------|
| 22/24 | 30             | 35             | 6  | 46  | 46  | TXE-22046 | TXE-24046 |
|       |                |                |    | 56  | 56  | TXE-22056 | TXE-24056 |
|       |                |                |    | 66  | 66  | TXE-22066 | TXE-24066 |
|       |                |                |    | 76  | 76  | TXE-22076 | TXE-24076 |
|       |                |                |    | 86  | 86  | TXE-22086 | TXE-24086 |
|       |                |                |    | 96  | 96  | TXE-22096 | TXE-24096 |
|       |                |                |    | 96  | 116 | TXE-22116 | TXE-24116 |
|       |                |                |    | 96  | 136 | TXE-22136 | TXE-24136 |
|       |                |                |    | 96  | 156 | TXE-22156 | TXE-24156 |
| 30/32 | 42             | 47             | 6  | 22  | 22  | TXE-30022 | TXE-32022 |
|       |                |                |    | 27  | 27  | TXE-30027 | TXE-32027 |
|       |                |                |    | 36  | 36  | TXE-30036 | TXE-32036 |
|       |                |                |    | 46  | 46  | TXE-30046 | TXE-32046 |
|       |                |                |    | 56  | 56  | TXE-30056 | TXE-32056 |
|       |                |                |    | 66  | 66  | TXE-30066 | TXE-32066 |
|       |                |                |    | 76  | 76  | TXE-30076 | TXE-32076 |
|       |                |                |    | 86  | 86  | TXE-30086 | TXE-32086 |
|       |                |                |    | 96  | 96  | TXE-30096 | TXE-32096 |
|       |                |                |    | 116 | 116 | TXE-30116 | TXE-32116 |
| 40/42 | 54             | 60             | 10 | 116 | 136 | TXE-30136 | TXE-32136 |
|       |                |                |    | 116 | 156 | TXE-30156 | TXE-32156 |
|       |                |                |    | 116 | 176 | TXE-30176 | TXE-32176 |
|       |                |                |    | 36  | 36  | TXE-40036 | TXE-42036 |
|       |                |                |    | 46  | 46  | TXE-40046 | TXE-42046 |
|       |                |                |    | 56  | 56  | TXE-40056 | TXE-42056 |
|       |                |                |    | 66  | 66  | TXE-40066 | TXE-42066 |
|       |                |                |    | 76  | 76  | TXE-40076 | TXE-42076 |
|       |                |                |    | 86  | 86  | TXE-40086 | TXE-42086 |
|       |                |                |    | 96  | 96  | TXE-40096 | TXE-42096 |
|       |                |                |    | 116 | 116 | TXE-40116 | TXE-42116 |
|       |                |                |    | 136 | 136 | TXE-40136 | TXE-42136 |
|       |                |                |    | 136 | 156 | TXE-40156 | TXE-42156 |
|       |                |                |    | 136 | 176 | TXE-40176 | TXE-42176 |
|       |                |                |    | 136 | 196 | TXE-40196 | TXE-42196 |
|       |                |                |    |     |     |           |           |



**TPB**


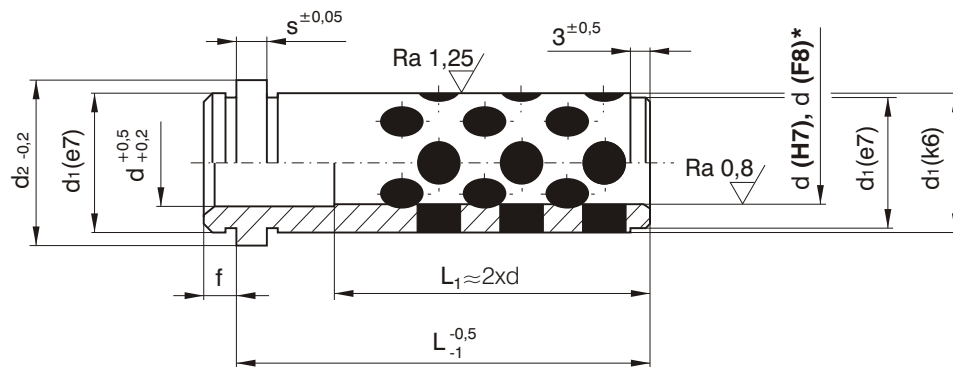
| d     | d <sub>1</sub> | d <sub>2</sub> | s | f | l  | L   | NR KAT.   | NR KAT.   | d     | d <sub>1</sub> | d <sub>2</sub> | s  | f  | l   | L   | NR KAT.   | NR KAT.   |
|-------|----------------|----------------|---|---|----|-----|-----------|-----------|-------|----------------|----------------|----|----|-----|-----|-----------|-----------|
| 14/15 | 20             | 25             | 6 | 9 | 26 | 17  | TPB-14017 | TPB-15017 | 22/24 | 30             | 35             | 6  | 9  | 75  | 66  | TPB-22066 | TPB-24066 |
|       |                |                |   |   | 31 | 22  | TPB-14022 | TPB-15022 |       |                |                |    |    | 85  | 76  | TPB-22076 | TPB-24076 |
|       |                |                |   |   | 36 | 27  | TPB-14027 | TPB-15027 |       |                |                |    |    | 95  | 86  | TPB-22086 | TPB-24086 |
|       |                |                |   |   | 45 | 36  | TPB-14036 | TPB-15036 |       |                |                |    |    | 96  | 96  | TPB-22096 | TPB-24096 |
|       |                |                |   |   | 55 | 46  | TPB-14046 | TPB-15046 |       |                |                |    |    | 96  | 116 | TPB-22116 | TPB-24116 |
|       |                |                |   |   | 56 | 56  | TPB-14056 | TPB-15056 |       |                |                |    |    | 96  | 136 | TPB-22136 | TPB-24136 |
|       |                |                |   |   | 56 | 66  | TPB-14066 | TPB-15066 |       |                |                |    |    | 96  | 156 | TPB-22156 | TPB-24156 |
|       |                |                |   |   | 56 | 76  | TPB-14076 | TPB-15076 | 30/32 | 42             | 47             | 6  | 9  | 36  | 27  | TPB-30027 | TPB-32027 |
|       |                |                |   |   | 56 | 86  | TPB-14086 | TPB-15086 |       |                |                |    |    | 45  | 36  | TPB-30036 | TPB-32036 |
|       |                |                |   |   | 56 | 96  | TPB-14096 | TPB-15096 |       |                |                |    |    | 55  | 46  | TPB-30046 | TPB-32046 |
| 18/20 | 26             | 31             | 6 | 9 | 56 | 116 | TPB-14116 | TPB-15116 |       |                |                |    |    | 65  | 56  | TPB-30056 | TPB-32056 |
|       |                |                |   |   | 26 | 17  | TPB-18017 | TPB-20017 |       |                |                |    |    | 75  | 66  | TPB-30066 | TPB-32066 |
|       |                |                |   |   | 31 | 22  | TPB-18022 | TPB-20022 |       |                |                |    |    | 85  | 76  | TPB-30076 | TPB-32076 |
|       |                |                |   |   | 36 | 27  | TPB-18027 | TPB-20027 |       |                |                |    |    | 95  | 86  | TPB-30086 | TPB-32086 |
|       |                |                |   |   | 45 | 36  | TPB-18036 | TPB-20036 |       |                |                |    |    | 105 | 96  | TPB-30096 | TPB-32096 |
|       |                |                |   |   | 55 | 46  | TPB-18046 | TPB-20046 |       |                |                |    |    | 116 | 116 | TPB-30116 | TPB-32116 |
|       |                |                |   |   | 65 | 56  | TPB-18056 | TPB-20056 |       |                |                |    |    | 116 | 136 | TPB-30136 | TPB-32136 |
|       |                |                |   |   | 75 | 66  | TPB-18066 | TPB-20066 |       |                |                |    |    | 116 | 156 | TPB-30156 | TPB-32156 |
|       |                |                |   |   | 76 | 76  | TPB-18076 | TPB-20076 |       |                |                |    |    | 116 | 196 | TPB-30196 | TPB-32196 |
|       |                |                |   |   | 76 | 86  | TPB-18086 | TPB-20086 | 40/42 | 54             | 60             | 10 | 12 | 58  | 46  | TPB-40046 | TPB-42046 |
| 22/24 | 30             | 35             | 6 | 9 | 76 | 96  | TPB-18096 | TPB-20096 |       |                |                |    |    | 68  | 56  | TPB-40056 | TPB-42056 |
|       |                |                |   |   | 76 | 116 | TPB-18116 | TPB-20116 |       |                |                |    |    | 78  | 66  | TPB-40066 | TPB-42066 |
|       |                |                |   |   | 76 | 136 | TPB-18136 | TPB-20136 |       |                |                |    |    | 88  | 76  | TPB-40076 | TPB-42076 |
|       |                |                |   |   | 26 | 17  | TPB-22017 | TPB-24017 |       |                |                |    |    | 98  | 86  | TPB-40086 | TPB-42086 |
|       |                |                |   |   | 31 | 22  | TPB-22022 | TPB-24022 |       |                |                |    |    | 108 | 96  | TPB-40096 | TPB-42096 |
|       |                |                |   |   | 36 | 27  | TPB-22027 | TPB-24027 |       |                |                |    |    | 128 | 116 | TPB-40116 | TPB-42116 |
|       |                |                |   |   | 45 | 36  | TPB-22036 | TPB-24036 |       |                |                |    |    | 136 | 136 | TPB-40136 | TPB-42136 |
|       |                |                |   |   | 55 | 46  | TPB-22046 | TPB-24046 |       |                |                |    |    | 136 | 156 | TPB-40156 | TPB-42156 |
|       |                |                |   |   | 65 | 56  | TPB-22056 | TPB-24056 |       |                |                |    |    | 136 | 196 | TPB-40196 | TPB-42196 |

**TXB**



| d     | d <sub>1</sub> | d <sub>2</sub> | s | l  | L   | NR KAT.   | NR KAT.   | d     | d <sub>1</sub> | d <sub>2</sub> | s | l   | L   | NR KAT.   | NR KAT.   |
|-------|----------------|----------------|---|----|-----|-----------|-----------|-------|----------------|----------------|---|-----|-----|-----------|-----------|
| 14/15 | 20             | 25             | 6 | 17 | 17  | TXB-14017 | TXB-15017 | 22/24 | 30             | 35             | 6 | 66  | 66  | TXB-22066 | TXB-24066 |
|       |                |                |   | 22 | 22  | TXB-14022 | TXB-15022 |       |                |                |   | 76  | 76  | TXB-22076 | TXB-24076 |
|       |                |                |   | 27 | 27  | TXB-14027 | TXB-15027 |       |                |                |   | 86  | 86  | TXB-22086 | TXB-24086 |
|       |                |                |   | 36 | 36  | TXB-14036 | TXB-15036 |       |                |                |   | 96  | 96  | TXB-22096 | TXB-24096 |
|       |                |                |   | 46 | 46  | TXB-14046 | TXB-15046 |       |                |                |   | 96  | 116 | TXB-22116 | TXB-24116 |
|       |                |                |   | 56 | 56  | TXB-14056 | TXB-15056 |       |                |                |   | 96  | 136 | TXB-22136 | TXB-24136 |
|       |                |                |   | 56 | 66  | TXB-14066 | TXB-15066 |       |                |                |   | 27  | 27  | TXB-30027 | TXB-32027 |
|       |                |                |   | 56 | 76  | TXB-14076 | TXB-15076 |       |                |                |   | 36  | 36  | TXB-30036 | TXB-32036 |
|       |                |                |   | 56 | 86  | TXB-14086 | TXB-15086 |       |                |                |   | 46  | 46  | TXB-30046 | TXB-32046 |
|       |                |                |   | 56 | 96  | TXB-14096 | TXB-15096 |       |                |                |   | 56  | 56  | TXB-30056 | TXB-32056 |
| 18/20 | 26             | 31             | 6 | 17 | 17  | TXB-18017 | TXB-20017 | 30/32 | 42             | 47             | 6 | 66  | 66  | TXB-30066 | TXB-32066 |
|       |                |                |   | 22 | 22  | TXB-18022 | TXB-20022 |       |                |                |   | 76  | 76  | TXB-30076 | TXB-32076 |
|       |                |                |   | 27 | 27  | TXB-18027 | TXB-20027 |       |                |                |   | 86  | 86  | TXB-30086 | TXB-32086 |
|       |                |                |   | 36 | 36  | TXB-18036 | TXB-20036 |       |                |                |   | 96  | 96  | TXB-30096 | TXB-32096 |
|       |                |                |   | 46 | 46  | TXB-18046 | TXB-20046 |       |                |                |   | 116 | 116 | TXB-30116 | TXB-32116 |
|       |                |                |   | 56 | 56  | TXB-18056 | TXB-20056 |       |                |                |   | 116 | 136 | TXB-30136 | TXB-32136 |
|       |                |                |   | 66 | 66  | TXB-18066 | TXB-20066 |       |                |                |   | 116 | 156 | TXB-30156 | TXB-32156 |
|       |                |                |   | 76 | 76  | TXB-18076 | TXB-20076 |       |                |                |   | 46  | 46  | TXB-40046 | TXB-42046 |
|       |                |                |   | 76 | 86  | TXB-18086 | TXB-20086 |       |                |                |   | 56  | 56  | TXB-40056 | TXB-42056 |
|       |                |                |   | 76 | 96  | TXB-18096 | TXB-20096 |       |                |                |   | 76  | 66  | TXB-40066 | TXB-42066 |
| 22/24 | 30             | 35             | 6 | 76 | 116 | TXB-18116 | TXB-20116 |       |                |                |   | 66  | 76  | TXB-40076 | TXB-42076 |
|       |                |                |   | 17 | 17  | TXB-22017 | TXB-24017 |       |                |                |   | 86  | 86  | TXB-40086 | TXB-42086 |
|       |                |                |   | 22 | 22  | TXB-22022 | TXB-24022 |       |                |                |   | 96  | 96  | TXB-40096 | TXB-42096 |
|       |                |                |   | 27 | 27  | TXB-22027 | TXB-24027 |       |                |                |   | 116 | 116 | TXB-40116 | TXB-42116 |
|       |                |                |   | 36 | 36  | TXB-22036 | TXB-24036 |       |                |                |   | 136 | 136 | TXB-40136 | TXB-42136 |
|       |                |                |   | 46 | 46  | TXB-22046 | TXB-24046 |       |                |                |   | 136 | 156 | TXB-40156 | TXB-42156 |
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**TPG**


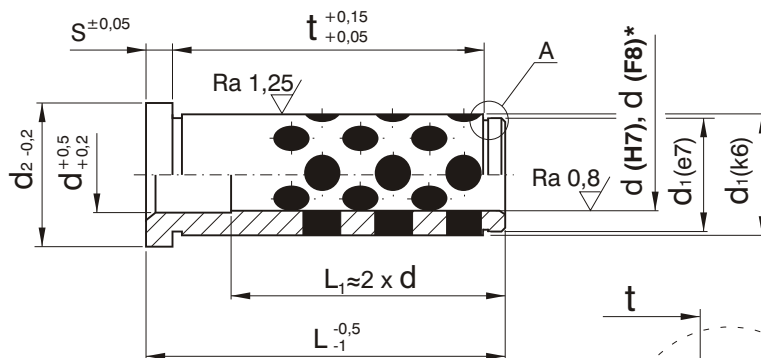
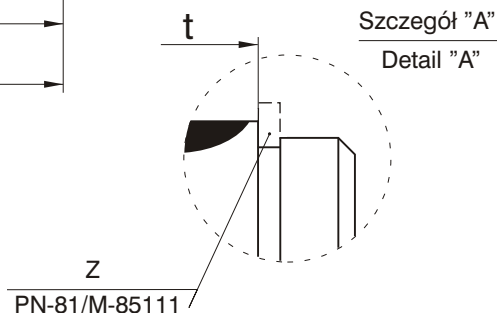
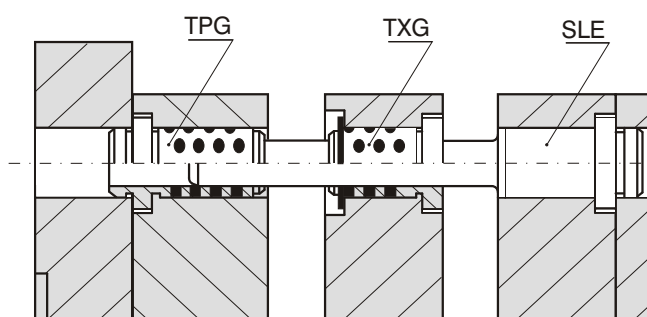
Mat: Brąz aluminiowy  
Grafit  
Aluminium Bronze  
Graphite

| d     | d <sub>1</sub> | d <sub>2</sub> | s | f | L  | NR KAT.   | NR KAT.   |
|-------|----------------|----------------|---|---|----|-----------|-----------|
| 9/10  | 14             | 16             | 3 | 5 | 12 | TPG-09012 | TPG-10012 |
|       |                |                |   |   | 17 | TPG-09017 | TPG-10017 |
|       |                |                |   |   | 22 | TPG-09022 | TPG-10022 |
|       |                |                |   |   | 27 | TPG-09027 | TPG-10027 |
|       |                |                |   |   | 36 | TPG-09036 | TPG-10036 |
|       |                |                |   |   | 46 | TPG-09046 | TPG-10046 |
|       |                |                |   |   | 56 | TPG-09056 | TPG-10056 |
| 14/15 | 20             | 25             | 6 | 6 | 17 | TPG-14017 | TPG-15017 |
|       |                |                |   |   | 22 | TPG-14022 | TPG-15022 |
|       |                |                |   |   | 27 | TPG-14027 | TPG-15027 |
|       |                |                |   |   | 36 | TPG-14036 | TPG-15036 |
|       |                |                |   |   | 46 | TPG-14046 | TPG-15046 |
|       |                |                |   |   | 56 | TPG-14056 | TPG-15056 |
|       |                |                |   |   | 66 | TPG-14066 | TPG-15066 |
| 18/20 | 26             | 31             | 6 | 8 | 76 | TPG-14076 | TPG-15076 |
|       |                |                |   |   | 86 | TPG-14086 | TPG-15086 |
|       |                |                |   |   | 17 | TPG-18017 | TPG-20017 |
|       |                |                |   |   | 22 | TPG-18022 | TPG-20022 |
|       |                |                |   |   | 27 | TPG-18027 | TPG-20027 |
|       |                |                |   |   | 36 | TPG-18036 | TPG-20036 |
|       |                |                |   |   | 46 | TPG-18046 | TPG-20046 |
| 22/24 | 30             | 35             | 6 | 8 | 56 | TPG-18056 | TPG-20056 |
|       |                |                |   |   | 66 | TPG-18066 | TPG-20066 |
|       |                |                |   |   | 76 | TPG-18076 | TPG-20076 |
|       |                |                |   |   | 86 | TPG-18086 | TPG-20086 |
|       |                |                |   |   | 96 | TPG-18096 | TPG-20096 |
|       |                |                |   |   | 22 | TPG-22022 | TPG-24022 |
|       |                |                |   |   | 27 | TPG-22027 | TPG-24027 |
| 22/24 | 30             | 35             | 6 | 8 | 36 | TPG-22036 | TPG-24036 |

| d     | d <sub>1</sub> | d <sub>2</sub> | s  | f  | L   | NR KAT.   | NR KAT.   |
|-------|----------------|----------------|----|----|-----|-----------|-----------|
| 22/24 | 30             | 35             | 6  | 8  | 46  | TPG-22046 | TPG-24046 |
|       |                |                |    |    | 56  | TPG-22056 | TPG-24056 |
|       |                |                |    |    | 66  | TPG-22066 | TPG-24066 |
|       |                |                |    |    | 76  | TPG-22076 | TPG-24076 |
|       |                |                |    |    | 86  | TPG-22086 | TPG-24086 |
|       |                |                |    |    | 96  | TPG-22096 | TPG-24096 |
|       |                |                |    |    | 116 | TPG-22116 | TPG-24116 |
| 30/32 | 42             | 47             | 6  | 8  | 136 | TPG-22136 | TPG-24136 |
|       |                |                |    |    | 27  | TPG-30027 | TPG-32027 |
|       |                |                |    |    | 36  | TPG-30036 | TPG-32036 |
|       |                |                |    |    | 46  | TPG-30046 | TPG-32046 |
|       |                |                |    |    | 56  | TPG-30056 | TPG-32056 |
|       |                |                |    |    | 66  | TPG-30066 | TPG-32066 |
|       |                |                |    |    | 76  | TPG-30076 | TPG-32076 |
| 40/42 | 54             | 60             | 10 | 10 | 86  | TPG-30086 | TPG-32086 |
|       |                |                |    |    | 96  | TPG-30096 | TPG-32096 |
|       |                |                |    |    | 116 | TPG-30116 | TPG-32116 |
|       |                |                |    |    | 136 | TPG-30136 | TPG-32136 |
|       |                |                |    |    | 46  | TPG-40046 | TPG-42046 |
|       |                |                |    |    | 56  | TPG-40056 | TPG-42056 |
|       |                |                |    |    | 66  | TPG-40066 | TPG-42066 |
| 40/42 | 54             | 60             | 10 | 10 | 76  | TPG-40076 | TPG-42076 |
|       |                |                |    |    | 86  | TPG-40086 | TPG-42086 |
|       |                |                |    |    | 96  | TPG-40096 | TPG-42096 |
|       |                |                |    |    | 116 | TPG-40116 | TPG-42116 |
|       |                |                |    |    | 136 | TPG-40136 | TPG-42136 |
|       |                |                |    |    | 156 | TPG-40156 | TPG-42156 |
|       |                |                |    |    | 196 | TPG-40196 | TPG-42196 |

\* Uwaga:  
Dostępne są również tuleje z otworem **d** w tolerancji **F8**  
Przykład zamawiania tulei w tolerancji **F8**  
**TPG-09012F**

\* Note:  
Bushing with hole tolerance **F8** are also available  
Example ordering in tolerance **F8**  
**TPG-09012F**


**TXG**


Mat: Brąz aluminiowy  
Grafit  
Aluminium Bronze  
Graphite

| d     | d <sub>1</sub> | d <sub>2</sub> | s | Z            | t    | L  | NR KAT.   | NR KAT.   |
|-------|----------------|----------------|---|--------------|------|----|-----------|-----------|
| 9/10  | 14             | 16             | 3 | Z14 / 14x1   | 5,5  | 12 | TXG-09012 | TXG-10012 |
|       |                |                |   |              | 10,5 | 17 | TXG-09017 | TXG-10017 |
|       |                |                |   |              | 15,5 | 22 | TXG-09022 | TXG-10022 |
|       |                |                |   |              | 20,5 | 27 | TXG-09027 | TXG-10027 |
|       |                |                |   |              | 29,5 | 36 | TXG-09036 | TXG-10036 |
|       |                |                |   |              | 39,5 | 46 | TXG-09046 | TXG-10046 |
| 12    | 18             | 23             | 6 | Z18 / 18x1,2 | 49,5 | 56 | TXG-09056 | TXG-10056 |
|       |                |                |   |              | 7    | 17 | TXG-12017 | -----     |
|       |                |                |   |              | 12   | 22 | TXG-12022 | -----     |
|       |                |                |   |              | 17   | 27 | TXG-12027 | -----     |
|       |                |                |   |              | 26   | 36 | TXG-12036 | -----     |
|       |                |                |   |              | 36   | 46 | TXG-12046 | -----     |
| 14/15 | 20             | 25             | 6 | Z20 / 20x1,2 | 46   | 56 | TXG-12056 | -----     |
|       |                |                |   |              | 7    | 17 | TXG-14017 | TXG-15017 |
|       |                |                |   |              | 12   | 22 | TXG-14022 | TXG-15022 |
|       |                |                |   |              | 17   | 27 | TXG-14027 | TXG-15027 |
|       |                |                |   |              | 26   | 36 | TXG-14036 | TXG-15036 |
|       |                |                |   |              | 36   | 46 | TXG-14046 | TXG-15046 |
| 16    | 22             | 27             | 6 | Z22 / 22x1,2 | 46   | 56 | TXG-14056 | TXG-15056 |
|       |                |                |   |              | 12   | 22 | TXG-16022 | -----     |
|       |                |                |   |              | 17   | 27 | TXG-16027 | -----     |
|       |                |                |   |              | 26   | 36 | TXG-16036 | -----     |
|       |                |                |   |              | 36   | 46 | TXG-16046 | -----     |
|       |                |                |   |              | 46   | 56 | TXG-16056 | -----     |
| 18/20 | 26             | 31             | 6 | Z26 / 26x1,2 | 7    | 17 | TXG-18017 | TXG-20017 |
|       |                |                |   |              | 12   | 22 | TXG-18022 | TXG-20022 |
|       |                |                |   |              | 17   | 27 | TXG-18027 | TXG-20027 |
|       |                |                |   |              | 26   | 36 | TXG-18036 | TXG-20036 |
|       |                |                |   |              | 36   | 46 | TXG-18046 | TXG-20046 |

\* Uwaga:

Dostępne są również tuleje z otworem **d** w tolerancji **F8**

Przykład zamawiania tulei w tolerancji F8

**TXG-09012F**

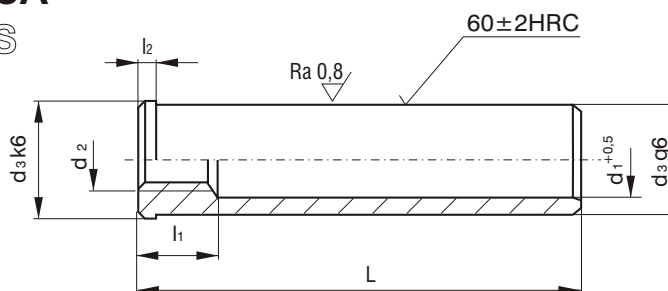
| d     | d <sub>1</sub> | d <sub>2</sub> | s  | Z             | t   | L   | NR KAT.   | NR KAT.   |
|-------|----------------|----------------|----|---------------|-----|-----|-----------|-----------|
| 18/20 | 26             | 31             | 6  | Z26           | 46  | 56  | TXG-18056 | TXG-20056 |
|       |                |                |    |               | 56  | 66  | TXG-18066 | TXG-20066 |
|       |                |                |    |               | 66  | 76  | TXG-18076 | TXG-20076 |
|       |                |                |    |               | 11  | 22  | TXG-22022 | TXG-24022 |
| 22/24 | 30             | 35             | 6  | Z30 / 30x1,5  | 16  | 27  | TXG-22027 | TXG-24027 |
|       |                |                |    |               | 25  | 36  | TXG-22036 | TXG-24036 |
|       |                |                |    |               | 35  | 46  | TXG-22046 | TXG-24046 |
|       |                |                |    |               | 45  | 56  | TXG-22056 | TXG-24056 |
|       |                |                |    |               | 55  | 66  | TXG-22066 | TXG-24066 |
|       |                |                |    |               | 65  | 76  | TXG-22076 | TXG-24076 |
|       |                |                |    |               | 75  | 86  | TXG-22086 | TXG-24086 |
|       |                |                |    |               | 85  | 96  | TXG-22096 | TXG-24096 |
| 30/32 | 42             | 47             | 6  | Z42 / 42x1,75 | 14  | 27  | TXG-30027 | TXG-32027 |
|       |                |                |    |               | 23  | 36  | TXG-30036 | TXG-32036 |
|       |                |                |    |               | 33  | 46  | TXG-30046 | TXG-32046 |
|       |                |                |    |               | 43  | 56  | TXG-30056 | TXG-32056 |
|       |                |                |    |               | 53  | 66  | TXG-30066 | TXG-32066 |
|       |                |                |    |               | 63  | 76  | TXG-30076 | TXG-32076 |
|       |                |                |    |               | 73  | 86  | TXG-30086 | TXG-32086 |
|       |                |                |    |               | 83  | 96  | TXG-30096 | TXG-32096 |
| 40/42 | 54             | 60             | 10 | Z55 / 55x2,0  | 103 | 116 | TXG-30116 | TXG-32116 |
|       |                |                |    |               | 28  | 46  | TXG-40046 | TXG-42046 |
|       |                |                |    |               | 38  | 56  | TXG-40056 | TXG-42056 |
|       |                |                |    |               | 48  | 66  | TXG-40066 | TXG-42066 |
|       |                |                |    |               | 58  | 76  | TXG-40076 | TXG-42076 |
|       |                |                |    |               | 68  | 86  | TXG-40086 | TXG-42086 |
|       |                |                |    |               | 78  | 96  | TXG-40096 | TXG-42096 |
|       |                |                |    |               | 98  | 116 | TXG-40116 | TXG-42116 |
|       |                |                |    |               | 118 | 136 | TXG-40136 | TXG-42136 |

\* Note:

Bushing with hole tolerance **F8** are also available

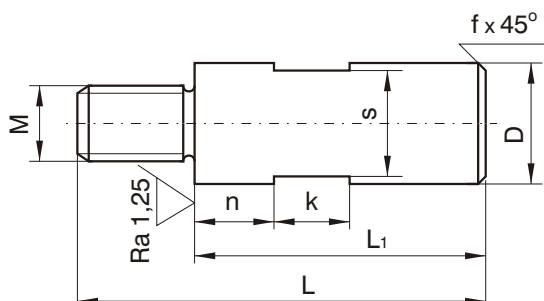
Example ordering in tolerance F8

**TXG-09012F**

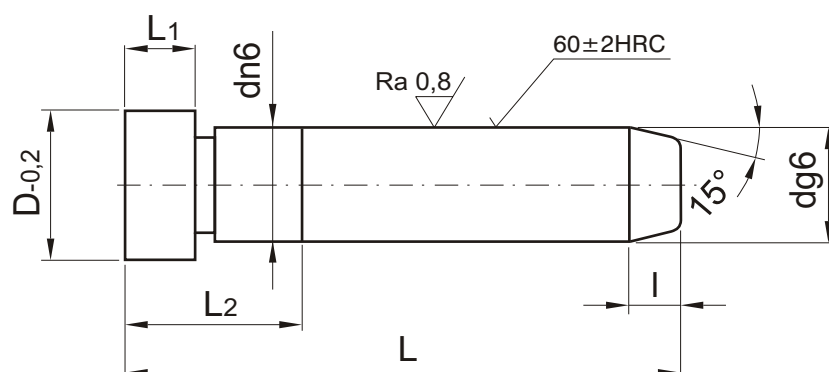
**TULEJA USTALAJĄCA**  
**LOCATING SLEEVES**
**TUE**


| $l_1$ | $l_2$ | $d_1$ | $d_2$ | $d_3$ | $L$ | NR KAT.    |
|-------|-------|-------|-------|-------|-----|------------|
| 8     | 2     | 11    | M6    | 14    | 20  | TUE -14020 |
|       |       |       |       |       | 30  | TUE -14030 |
|       |       |       |       |       | 40  | TUE -14040 |
|       |       |       |       |       | 50  | TUE -14050 |
|       |       |       |       |       | 60  | TUE -14060 |
|       |       |       |       |       | 70  | TUE -14070 |
|       |       |       |       |       | 80  | TUE -14080 |
|       |       |       |       |       | 100 | TUE -14100 |
| 13    | 2     | 16    | M8    | 20    | 30  | TUE -20030 |
|       |       |       |       |       | 40  | TUE -20040 |
|       |       |       |       |       | 60  | TUE -20060 |
|       |       |       |       |       | 80  | TUE -20080 |
|       |       |       |       |       | 100 | TUE -20100 |
|       |       |       |       |       | 120 | TUE -20120 |
|       |       |       |       |       | 140 | TUE -20140 |
|       |       |       |       |       | 160 | TUE -20160 |
| 13    | 2,5   | 21    | M10   | 26    | 30  | TUE -26030 |
|       |       |       |       |       | 40  | TUE -26040 |
|       |       |       |       |       | 60  | TUE -26060 |
|       |       |       |       |       | 80  | TUE -26080 |
|       |       |       |       |       | 100 | TUE -26100 |
|       |       |       |       |       | 120 | TUE -26120 |
|       |       |       |       |       | 140 | TUE -26140 |
|       |       |       |       |       | 160 | TUE -26160 |
| 13    | 2,5   | 25    | M12   | 30    | 180 | TUE -26180 |
|       |       |       |       |       | 40  | TUE -30040 |
|       |       |       |       |       | 60  | TUE -30060 |
|       |       |       |       |       |     |            |

| $l_1$ | $l_2$ | $d_1$ | $d_2$ | $d_3$ | $L$ | NR KAT.   |
|-------|-------|-------|-------|-------|-----|-----------|
| 13    | 2,5   | 25    | M12   | 30    | 80  | TUE-30080 |
|       |       |       |       |       | 100 | TUE-30100 |
|       |       |       |       |       | 120 | TUE-30120 |
|       |       |       |       |       | 140 | TUE-30140 |
|       |       |       |       |       | 160 | TUE-30160 |
|       |       |       |       |       | 180 | TUE-30180 |
|       |       |       |       |       | 200 | TUE-30200 |
|       |       |       |       |       | 240 | TUE-30240 |
| 13    | 4,5   | 33    | M16   | 42    | 40  | TUE-42040 |
|       |       |       |       |       | 60  | TUE-42060 |
|       |       |       |       |       | 80  | TUE-42080 |
|       |       |       |       |       | 100 | TUE-42100 |
|       |       |       |       |       | 120 | TUE-42120 |
|       |       |       |       |       | 140 | TUE-42140 |
|       |       |       |       |       | 160 | TUE-42160 |
|       |       |       |       |       | 180 | TUE-42180 |
| 13    | 4,5   | 43    | M20   | 54    | 200 | TUE-42200 |
|       |       |       |       |       | 220 | TUE-42220 |
|       |       |       |       |       | 260 | TUE-42260 |
|       |       |       |       |       | 300 | TUE-42300 |
|       |       |       |       |       | 60  | TUE-54060 |
|       |       |       |       |       | 80  | TUE-54080 |
|       |       |       |       |       | 120 | TUE-54120 |
|       |       |       |       |       | 160 | TUE-54160 |
| 13    | 4,5   | 43    | M20   | 54    | 200 | TUE-54200 |
|       |       |       |       |       | 240 | TUE-54240 |
|       |       |       |       |       | 280 | TUE-54280 |
|       |       |       |       |       |     |           |

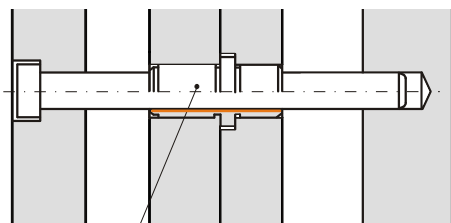
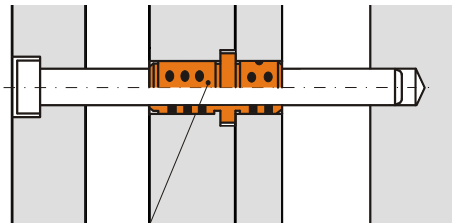
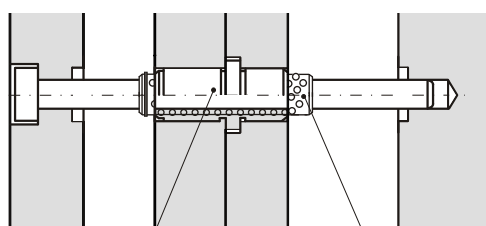
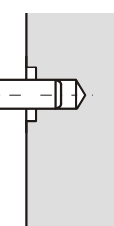
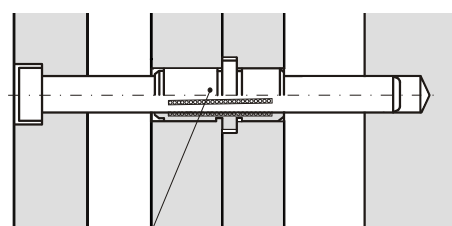
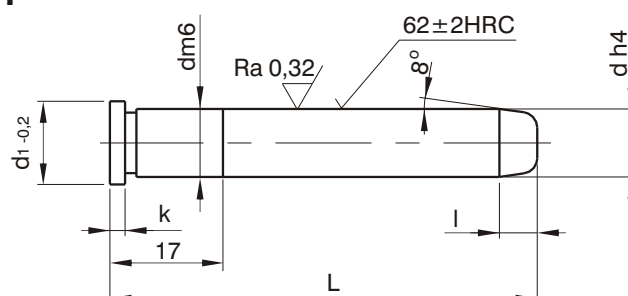
**NÓŻKA**  
**FEET**

**NF**
**42±2HRC**

| $M$ | $D$ | $k$ | $f$ | $s$ | $L$ | $L_1$ | $n$ | NR KAT.  |
|-----|-----|-----|-----|-----|-----|-------|-----|----------|
| 10  | 16  | 12  | 1   | 13  | 56  | 40    | 5   | NF-10056 |
|     |     |     |     |     | 96  | 80    | 15  | NF-10096 |
| 12  | 20  | 14  | 1,6 | 17  | 70  | 50    | 5   | NF-12070 |
|     |     |     |     |     | 120 | 100   | 15  | NF-12120 |
| 16  | 25  | 16  | 1,6 | 22  | 88  | 63    | 15  | NF-16088 |
| 20  | 32  | 18  | 2,5 | 27  | 112 | 80    | 15  | NF-20112 |

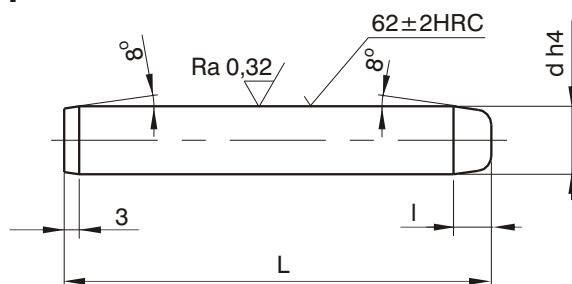

**SS**

| I  | D   | L1  | L2       | d  | L        | NR KAT.  |
|----|-----|-----|----------|----|----------|----------|
| 4  | 12  | 3   | 12       | 9  | 40       | SS-09040 |
|    |     |     |          |    | 60       | SS-09060 |
|    |     |     |          |    | 80       | SS-09080 |
|    |     |     |          |    | 100      | SS-09100 |
|    |     |     |          |    | 120      | SS-09120 |
|    |     |     |          | 10 | 40       | SS-10040 |
|    |     |     |          |    | 60       | SS-10060 |
|    |     |     |          |    | 80       | SS-10080 |
|    |     |     |          |    | 100      | SS-10100 |
|    |     |     |          |    | 120      | SS-10120 |
| 7  | 16  | 6   | 17       | 12 | 40       | SS-12040 |
|    |     |     |          |    | 60       | SS-12060 |
|    |     |     |          |    | 80       | SS-12080 |
|    |     |     |          |    | 100      | SS-12100 |
|    |     |     |          |    | 120      | SS-12120 |
|    |     |     |          |    | 140      | SS-12140 |
|    | 18  | 8   | 22       | 14 | 160      | SS-12160 |
|    |     |     |          |    | 60       | SS-14060 |
|    |     |     |          |    | 80       | SS-14080 |
|    |     |     |          |    | 100      | SS-14100 |
|    |     |     |          |    | 120      | SS-14120 |
|    |     |     |          |    | 140      | SS-14140 |
|    |     |     |          |    | 160      | SS-14160 |
|    |     |     |          |    | 180      | SS-14180 |
|    |     |     |          | 15 | 60       | SS-15060 |
|    |     |     |          |    | 80       | SS-15080 |
|    |     |     |          |    | 100      | SS-15100 |
|    |     |     |          |    | 120      | SS-15120 |
|    |     |     |          |    | 140      | SS-15140 |
|    |     |     |          |    | 160      | SS-15160 |
|    | 20  |     |          | 20 | 180      | SS-15180 |
|    |     |     |          |    | 40       | SS-16040 |
|    |     |     |          |    | 60       | SS-16060 |
|    |     |     |          |    | 80       | SS-16080 |
|    |     |     |          |    | 100      | SS-16100 |
|    |     |     |          |    | 120      | SS-16120 |
|    | 140 |     |          |    | SS-16140 |          |
|    | 160 |     |          |    | SS-16160 |          |
|    | 22  |     |          | 18 | 60       | SS-18060 |
|    |     |     |          |    | 80       | SS-18080 |
|    |     |     |          |    | 100      | SS-18100 |
|    |     |     |          |    | 120      | SS-18120 |
|    |     |     |          |    | 140      | SS-18140 |
|    |     |     |          |    | 160      | SS-18160 |
|    |     |     |          |    | 180      | SS-18180 |
|    |     |     |          |    | 200      | SS-18200 |
| 24 | 20  | 240 | SS-18240 |    |          |          |
|    |     | 60  | SS-20060 |    |          |          |
|    |     | 80  | SS-20080 |    |          |          |
|    |     | 100 | SS-20100 |    |          |          |
|    |     |     |          |    | 120      | SS-20120 |

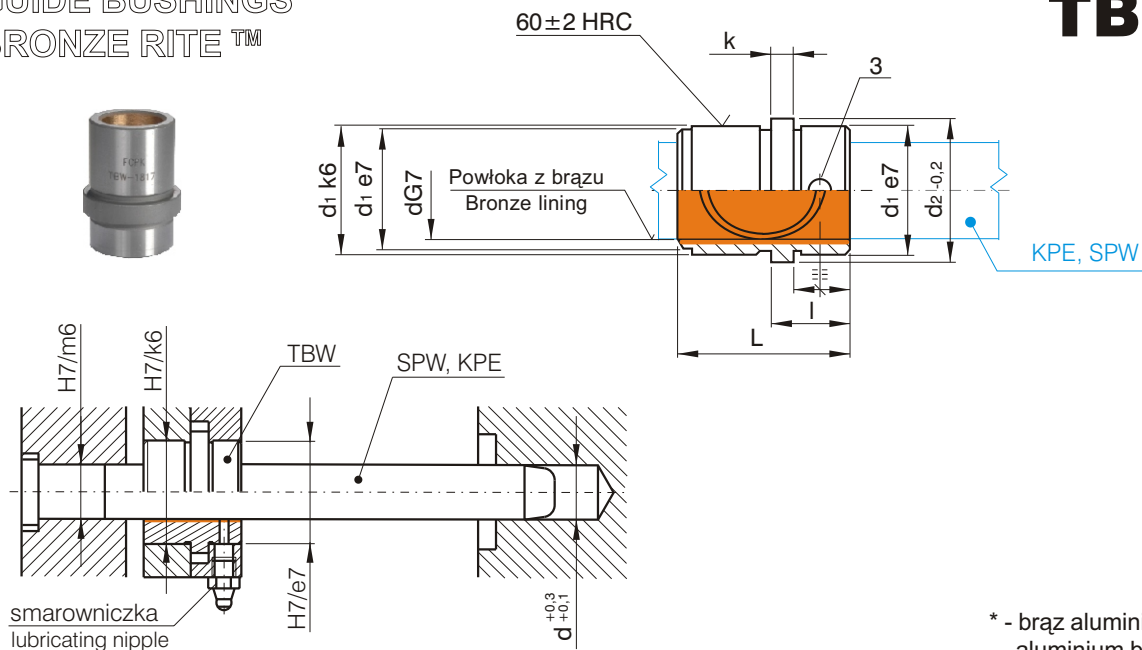
| I | D  | L1 | L2 | d  | L   | NR KAT.  |
|---|----|----|----|----|-----|----------|
| 4 | 24 | 8  | 22 | 20 | 140 | SS-20140 |
|   |    |    |    |    | 160 | SS-20160 |
|   |    |    |    |    | 180 | SS-20180 |
|   |    |    |    |    | 200 | SS-20200 |
|   |    |    |    |    | 240 | SS-20240 |
|   |    |    |    | 22 | 80  | SS-22080 |
|   |    |    |    |    | 100 | SS-22100 |
|   |    |    |    |    | 120 | SS-22120 |
|   |    |    |    |    | 140 | SS-22140 |
|   |    |    |    |    | 160 | SS-22160 |
| 7 | 26 | 15 | 27 | 22 | 180 | SS-22180 |
|   |    |    |    |    | 200 | SS-22200 |
|   |    |    |    |    | 220 | SS-22220 |
|   |    |    |    |    | 240 | SS-22240 |
|   |    |    |    |    | 300 | SS-22300 |
|   | 28 | 15 | 27 | 24 | 80  | SS-24080 |
|   |    |    |    |    | 100 | SS-24100 |
|   |    |    |    |    | 120 | SS-24120 |
|   |    |    |    |    | 140 | SS-24140 |
|   |    |    |    |    | 160 | SS-24160 |
|   |    |    |    |    | 180 | SS-24180 |
|   |    |    |    |    | 200 | SS-24200 |
|   |    |    |    |    | 220 | SS-24220 |
|   |    |    |    |    | 240 | SS-24240 |
|   |    |    |    |    | 300 | SS-24300 |
|   | 36 | 15 | 27 | 30 | 100 | SS-30100 |
|   |    |    |    |    | 120 | SS-30120 |
|   |    |    |    |    | 160 | SS-30160 |
|   |    |    |    |    | 200 | SS-30200 |
|   |    |    |    |    | 240 | SS-30240 |
|   |    |    |    |    | 300 | SS-30300 |
|   |    |    |    |    | 360 | SS-30360 |
|   |    |    |    | 32 | 100 | SS-32100 |
|   |    |    |    |    | 120 | SS-32120 |
| 7 | 36 | 15 | 27 | 32 | 160 | SS-32160 |
|   |    |    |    |    | 200 | SS-32200 |
|   |    |    |    |    | 240 | SS-32240 |
|   |    |    |    |    | 300 | SS-32300 |
|   |    |    |    |    | 360 | SS-32360 |
|   |    |    |    |    | 160 | SS-40160 |
|   | 48 | 15 | 27 | 40 | 200 | SS-40200 |
|   |    |    |    |    | 240 | SS-40240 |
|   |    |    |    |    | 300 | SS-40300 |
|   |    |    |    |    | 360 | SS-40360 |
| 7 | 58 | 15 | 27 | 50 | 160 | SS-50160 |
|   |    |    |    |    | 200 | SS-50200 |
|   |    |    |    |    | 240 | SS-50240 |
|   |    |    |    |    | 300 | SS-50300 |
|   |    |    |    |    | 360 | SS-50360 |
|   |    |    |    |    | 360 | SS-50360 |

**RODZAJE PROWADZEŃ PŁYT WYPYCHACZY**
**TYPES OF EJECTION SYSTEMS**

**TBW**

**TGW**

**TKW**

**KKW**

**DKA**
**SŁUP PROWADZĄCY**
**LEADER PINS**

**SPW**

| d  | d <sub>1</sub> | l | k | NR KATALOGOWY |           |           |           |           |           |           |
|----|----------------|---|---|---------------|-----------|-----------|-----------|-----------|-----------|-----------|
|    |                |   |   | L=80          | L=100     | L=120     | L=140     | L=160     | L=200     | L=240     |
| 12 | 16             | 4 | 4 | SPW-12080     | SPW-12100 | SPW-12120 |           |           |           |           |
| 18 | 22             | 7 | 6 |               |           | SPW-18120 | SPW-18140 | SPW-18160 |           |           |
| 24 | 27             | 7 | 6 |               |           |           | SPW-24140 | SPW-24160 | SPW-24200 |           |
| 30 | 36             | 7 | 6 |               |           |           |           | SPW-30160 | SPW-30200 | SPW-30240 |

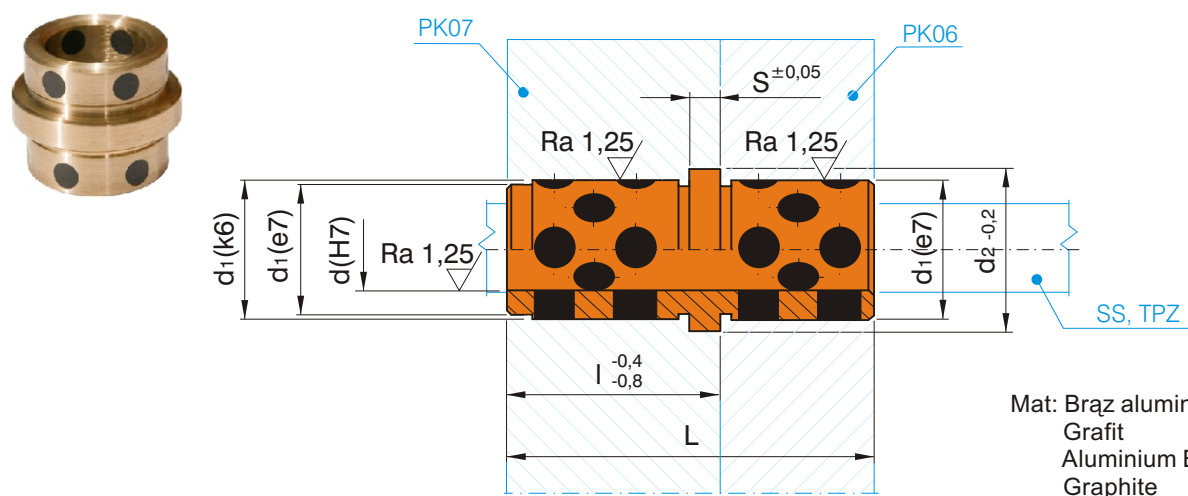
**SŁUP PROWADZĄCY**
**LEADER PINS**

**KPE**

| d  | l | NR KATALOGOWY |           |           |           |
|----|---|---------------|-----------|-----------|-----------|
|    |   | L=100         | L=125     | L=160     | L=240     |
| 12 | 6 | KPE-12100     | KPE-12125 |           |           |
| 18 | 7 |               | KPE-18125 | KPE-18160 |           |
| 30 | 7 |               |           | KPE-30160 | KPE-30240 |

**TULEJA PROWADZĄCA**
**GUIDE BUSHINGS**
**BRONZE RITE™**
**TBW**


\* - brąz aluminiowy  
- aluminium bronze

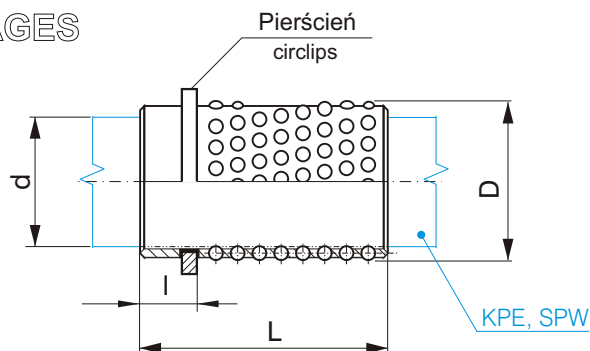
| d  | d <sub>1</sub> | d <sub>2</sub> | K | NR KATALOGOWY |              |              |              |              |
|----|----------------|----------------|---|---------------|--------------|--------------|--------------|--------------|
|    |                |                |   | I=9<br>L=21   | I=12<br>L=29 | I=17<br>L=39 | I=22<br>L=49 | I=27<br>L=63 |
| 12 | 16             | 19             | 3 | TBW-1209*     | TBW-1212*    |              |              |              |
| 18 | 26             | 30             | 6 |               | TBW-1812     | TBW-1817     | TBW-1822     |              |
| 30 | 42             | 46             | 6 |               |              | TBW-3017     | TBW-3022     | TBW-3027     |

**TULEJA PROWADZĄCA SAMOSMARUJĄCA**
**SELF-LUBRICATING GUIDE BUSHING**
**TGW**


Mat: Brąz aluminiowy  
Grafit  
Aluminium Bronze  
Graphite

| d     | d <sub>1</sub> | d <sub>2</sub> | s | I  | L  | NR KAT.   | NR KAT.   |
|-------|----------------|----------------|---|----|----|-----------|-----------|
| 14/15 | 20             | 25             | 6 | 17 | 26 | TGW-14017 | TGW-15017 |
| 18/20 | 26             | 31             |   | 22 | 39 | TGW-18022 | TGW-20022 |
| 22/24 | 30             | 35             |   | 27 | 49 | TGW-22027 | TGW-24027 |
| 30/32 | 42             | 47             |   | 36 | 63 | TGW-30036 | TGW-32036 |

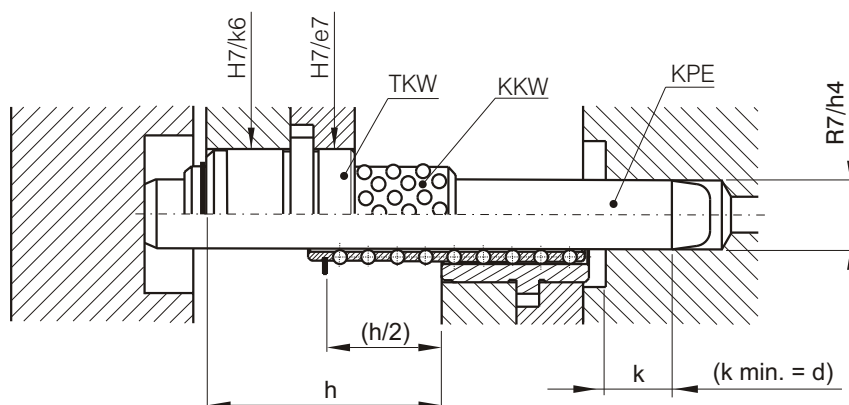
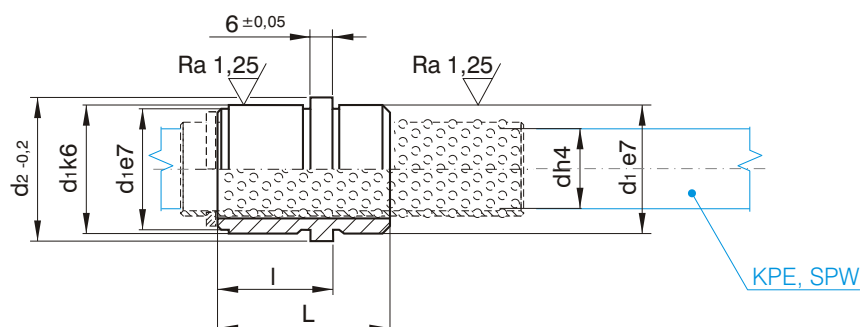
**KOSZYK KULKOWY**  
BALL BEARINGS CAGES

**KKW**


Mat: Koszyk - aluminium  
Kulki - stal hartowana  
Cage - aluminium  
Balls - hardened steel

| d  | D  | I   | NR KATALOGOWY |          |          |          |          |          |
|----|----|-----|---------------|----------|----------|----------|----------|----------|
|    |    |     | L=40          | L=45     | L=56     | L=71     | L=75     | L=95     |
| 12 | 17 | 2,1 | KKW-1240      |          | KKW-1256 |          |          |          |
| 18 | 24 | 3,0 |               | KKW-1845 | KKW-1856 | KKW-1871 |          |          |
| 30 | 38 | 4,8 |               |          | KKW-3056 |          | KKW-3075 | KKW-3095 |

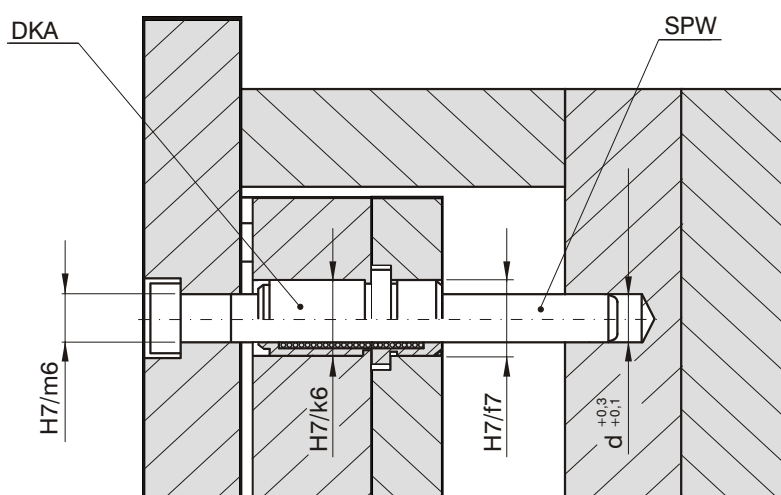
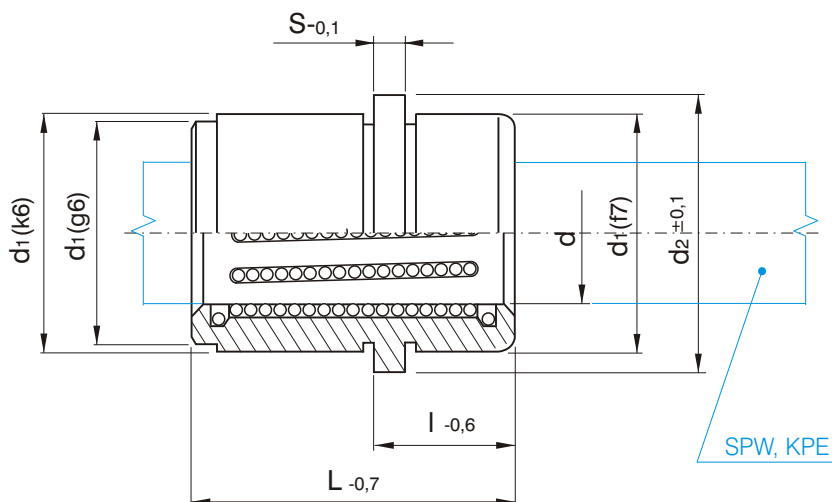
**TULEJA PROWADZĄCA**  
GUIDE BUSHINGS

**TKW**


63±2 HRC

| d Nom | d1 | d2 | L  | NR KATALOGOWY |          |          |
|-------|----|----|----|---------------|----------|----------|
|       |    |    |    | I=18          | I=23     | I=33     |
| 12    | 22 | 26 | 24 | TKW-1218      |          |          |
| 18    | 30 | 35 | 34 |               | TKW-1823 |          |
| 30    | 46 | 52 | 54 |               |          | TKW-3033 |

**DKA**

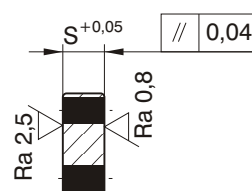
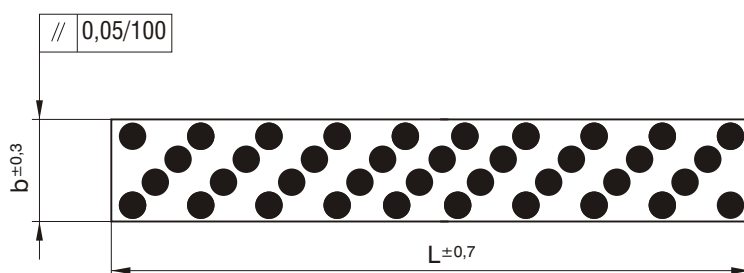


| d  | d <sub>1</sub> | d <sub>2</sub> | s | l  | L  | NR KAT.  |
|----|----------------|----------------|---|----|----|----------|
| 12 | 22             | 26             | 6 | 12 | 26 | DKA-1226 |
| 18 | 30             | 35             | 6 | 17 | 35 | DKA-1835 |
| 24 | 38             | 43             | 6 | 22 | 45 | DKA-2445 |
| 30 | 46             | 52             | 6 | 27 | 55 | DKA-3055 |

Mat: Tulejka - stal 64±2HRC  
Koszyk - mosiądz  
Kulki - stal hartowana  
Bush - steel 64±2HRC  
Cage - brass  
Balls - hardened steel



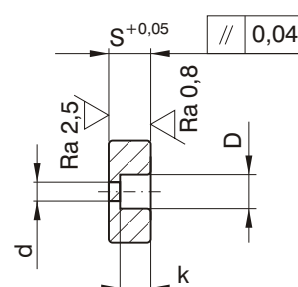
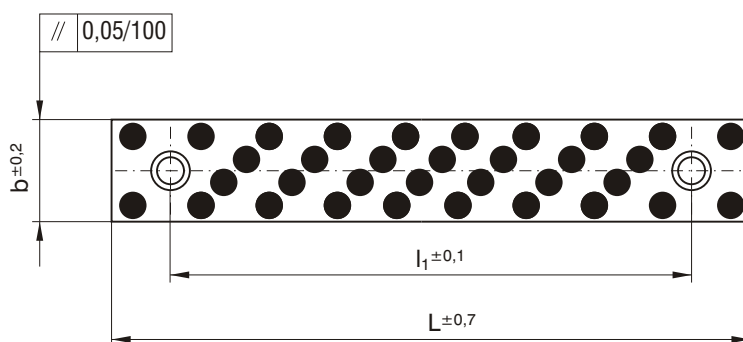
# PFA



| b  | s  | L   | NR KAT.     |
|----|----|-----|-------------|
| 30 | 8  | 500 | PFA-3008500 |
| 50 | 10 | 500 | PFA-5010500 |
| 80 | 12 | 500 | PFA-8012500 |

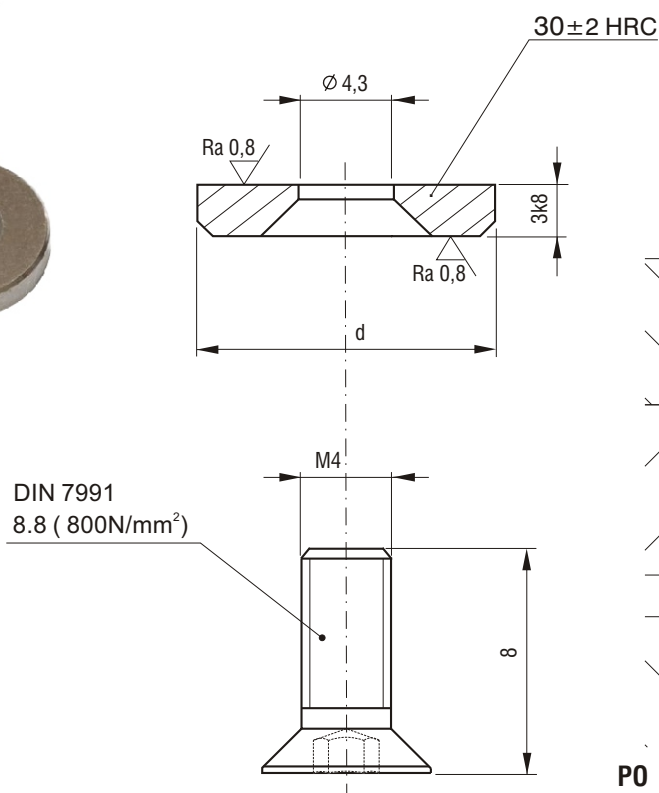
Mat: Brąz aluminiowy  
 Grafit  
 Aluminium Bronze  
 Graphite

# PFB

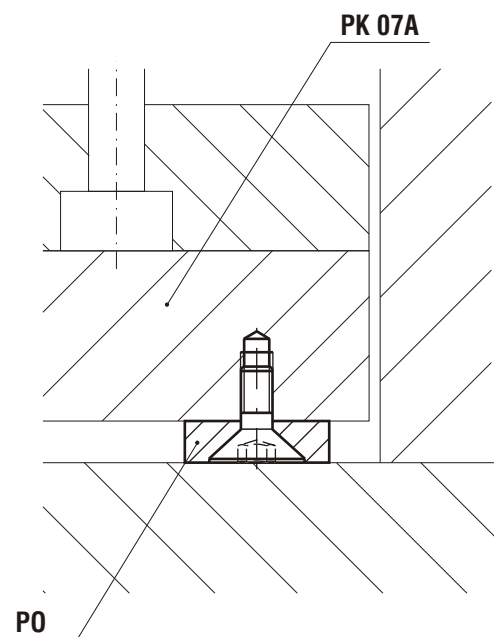


Mat: Brąz aluminiowy  
 Grafit  
 Aluminium Bronze  
 Graphite

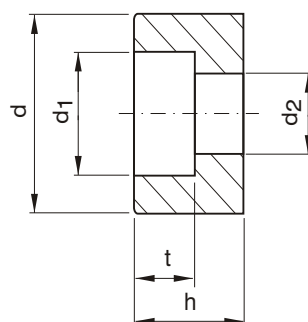
| s  | b  | k   | d   | D   | L              |             |             |             |
|----|----|-----|-----|-----|----------------|-------------|-------------|-------------|
|    |    |     |     |     | 50             | 75          | 100         | 150         |
|    |    |     |     |     | l <sub>1</sub> |             |             |             |
|    |    |     |     |     | 30             | 45          | 50          | 100         |
|    |    |     |     |     | NR KAT.        |             |             |             |
| 8  | 20 | 5.7 | 5.5 | 9.5 | PFB-2008050    | PFB-2008075 | ————        | ————        |
| 10 | 20 | 6.8 | 6.6 | 11  | ————           | PFB-2010075 | PFB-2010100 | ————        |
|    | 30 |     |     |     | ————           | PFB-3010075 | PFB-3010100 | ————        |
| 12 | 40 | 9   | 9   | 14  | ————           | PFB-4012075 | PFB-4012100 | PFB-4012150 |
|    | 50 |     |     |     | ————           | PFB-5012075 | PFB-5012100 | PFB-5012150 |



**PO**



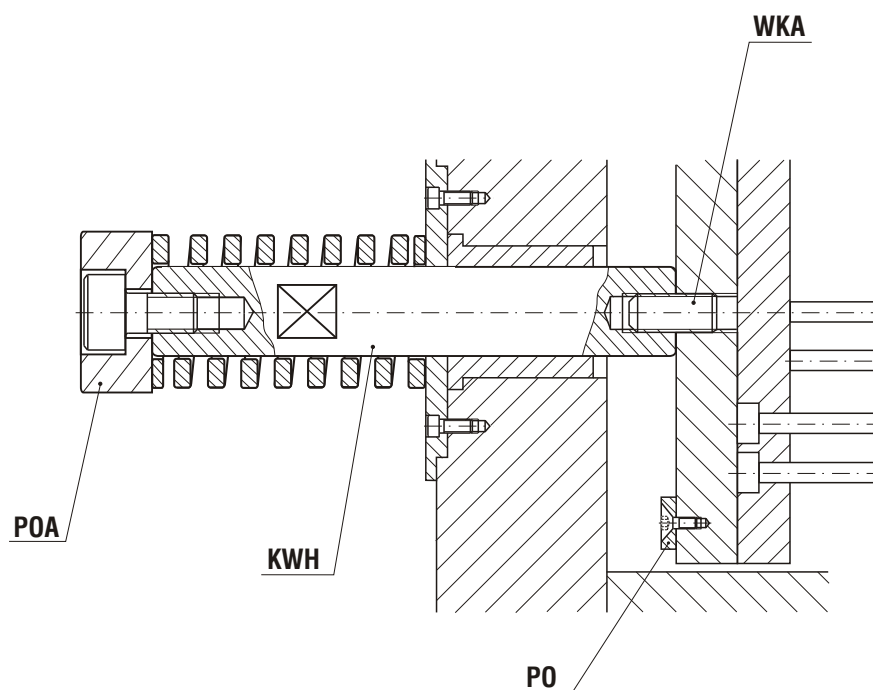
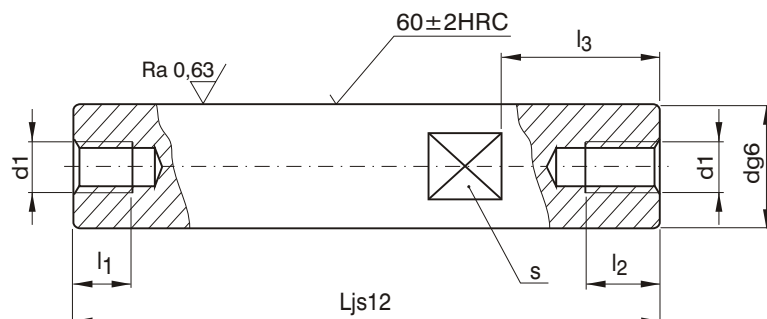
| NR KAT.  | d  | DIN 7991 |
|----------|----|----------|
| PO -1803 | 18 | M4x8     |
| PO -2803 | 28 |          |



**POA**

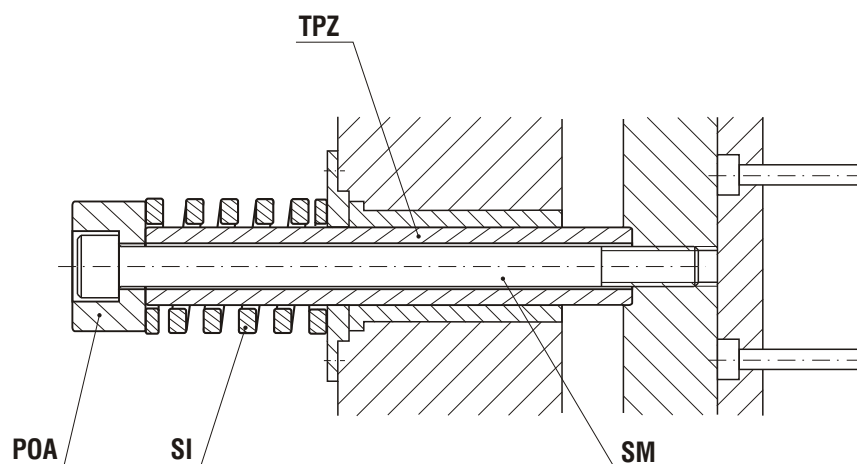
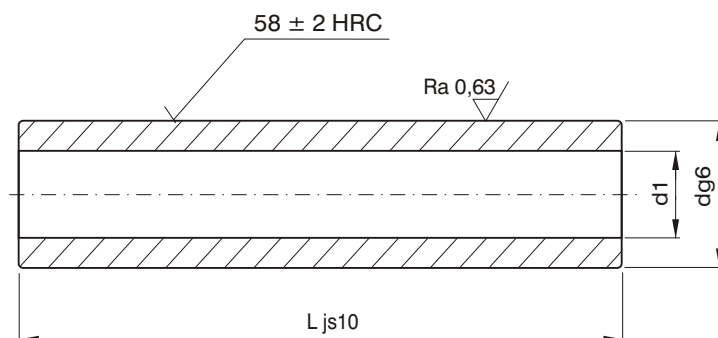
| d  | d <sub>1</sub> | d <sub>2</sub> | t    | h  | NR KAT.  |
|----|----------------|----------------|------|----|----------|
| 15 | 11             | 6,6            | 8,4  | 10 | POA-1510 |
| 22 | 14,5           | 9              | 11   | 14 | POA-2214 |
| 36 | 17,5           | 11             | 13,5 | 20 | POA-3620 |
| 46 | 20             | 14             | 15,5 | 25 | POA-4625 |
| 56 | 26             | 18             | 21   | 32 | POA-5632 |

30±2 HRC

**KWH**


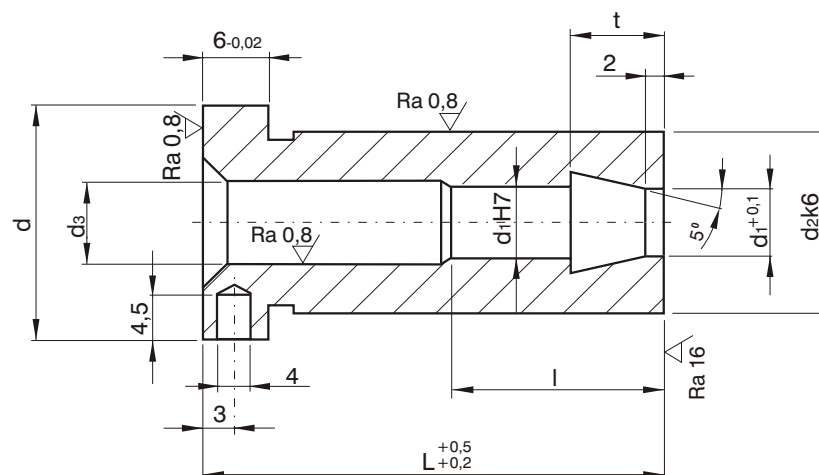
| d  | d1  | s  | l1 | l2 | l3 | L   | NR KAT.   |
|----|-----|----|----|----|----|-----|-----------|
| 10 | M6  | 9  | 9  | 16 | 20 | 60  | KWH-10060 |
|    |     |    |    |    |    | 70  | KWH-10070 |
|    |     |    |    |    |    | 80  | KWH-10080 |
|    |     |    |    |    |    | 100 | KWH-10100 |
|    |     |    |    |    |    | 120 | KWH-10120 |
|    |     |    |    |    |    | 140 | KWH-10140 |
| 14 | M8  | 12 | 11 | 16 | 25 | 60  | KWH-14060 |
|    |     |    |    |    |    | 70  | KWH-14070 |
|    |     |    |    |    |    | 80  | KWH-14080 |
|    |     |    |    |    |    | 100 | KWH-14100 |
|    |     |    |    |    |    | 120 | KWH-14120 |
|    |     |    |    |    |    | 140 | KWH-14140 |
|    |     |    |    |    |    | 160 | KWH-14160 |
|    |     |    |    |    |    | 180 | KWH-14180 |
| 18 | M10 | 14 | 12 | 20 | 45 | 100 | KWH-18100 |
|    |     |    |    |    |    | 120 | KWH-18120 |
|    |     |    |    |    |    | 140 | KWH-18140 |
|    |     |    |    |    |    | 160 | KWH-18160 |
|    |     |    |    |    |    | 180 | KWH-18180 |
|    |     |    |    |    |    | 200 | KWH-18200 |

| d  | d1  | s  | l1 | l2 | l3 | L   | NR KAT.   |
|----|-----|----|----|----|----|-----|-----------|
| 18 | M10 | 14 | 12 | 20 | 45 | 220 | KWH-18220 |
|    |     |    |    |    |    | 240 | KWH-18240 |
| 20 | M12 | 16 | 14 | 25 | 45 | 100 | KWH-20100 |
|    |     |    |    |    |    | 120 | KWH-20120 |
|    |     |    |    |    |    | 140 | KWH-20140 |
|    |     |    |    |    |    | 160 | KWH-20160 |
|    |     |    |    |    |    | 180 | KWH-20180 |
|    |     |    |    |    |    | 200 | KWH-20200 |
| 24 | M12 | 19 | 14 | 25 | 50 | 120 | KWH-20220 |
|    |     |    |    |    |    | 140 | KWH-20240 |
|    |     |    |    |    |    | 160 | KWH-20260 |
|    |     |    |    |    |    | 180 | KWH-20280 |
|    |     |    |    |    |    | 200 | KWH-20300 |
|    |     |    |    |    |    | 220 | KWH-20320 |
|    |     |    |    |    |    | 240 | KWH-20340 |
|    |     |    |    |    |    | 260 | KWH-20360 |
| 30 | M16 | 24 | 16 | 30 | 56 | 180 | KWH-24120 |
|    |     |    |    |    |    | 220 | KWH-24140 |
|    |     |    |    |    |    | 260 | KWH-24160 |
|    |     |    |    |    |    | 300 | KWH-24180 |

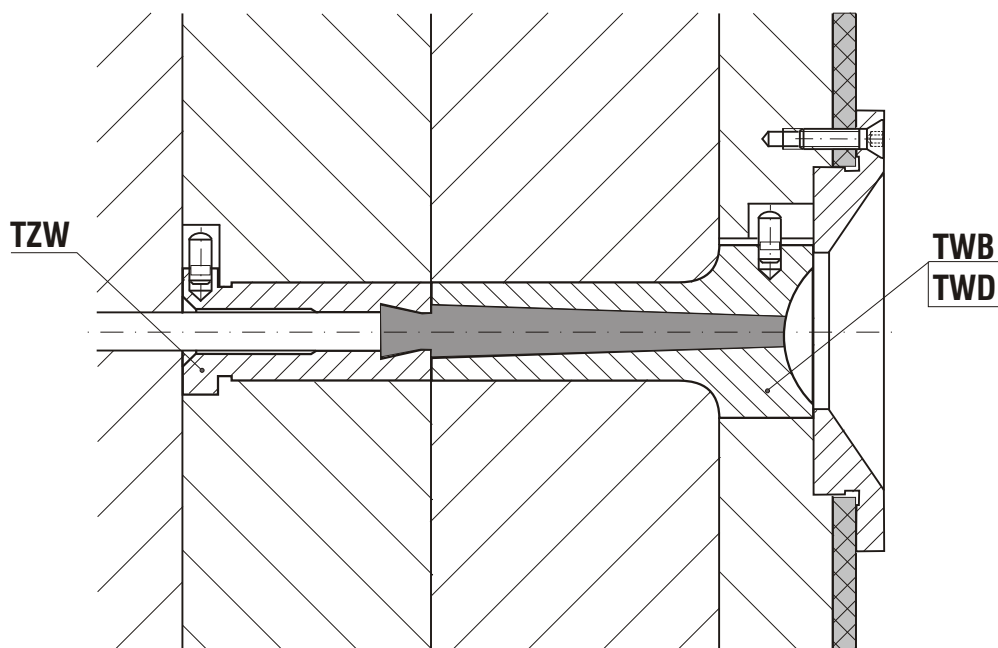
**TPZ**


| d  | d <sub>1</sub> | L   | NR KAT.   |
|----|----------------|-----|-----------|
| 10 | 6,2            | 20  | TPZ-10020 |
|    |                | 30  | TPZ-10030 |
|    |                | 40  | TPZ-10040 |
|    |                | 50  | TPZ-10050 |
|    |                | 60  | TPZ-10060 |
|    |                | 70  | TPZ-10070 |
|    |                | 80  | TPZ-10080 |
|    |                | 100 | TPZ-10100 |
|    |                | 120 | TPZ-10120 |
|    |                | 140 | TPZ-10140 |
| 14 | 8,3            | 30  | TPZ-14030 |
|    |                | 40  | TPZ-14040 |
|    |                | 50  | TPZ-14050 |
|    |                | 60  | TPZ-14060 |
|    |                | 70  | TPZ-14070 |
|    |                | 80  | TPZ-14080 |
|    |                | 100 | TPZ-14100 |
|    |                | 120 | TPZ-14120 |
|    |                | 140 | TPZ-14140 |
|    |                | 160 | TPZ-14160 |
| 18 | 10,4           | 180 | TPZ-14180 |
|    |                | 40  | TPZ-18040 |
|    |                | 60  | TPZ-18060 |
|    |                | 80  | TPZ-18080 |
|    |                | 100 | TPZ-18100 |

| d  | d <sub>1</sub> | L   | NR KAT.   |
|----|----------------|-----|-----------|
| 18 | 10,4           | 120 | TPZ-18120 |
|    |                | 140 | TPZ-18140 |
|    |                | 160 | TPZ-18160 |
|    |                | 180 | TPZ-18180 |
|    |                | 200 | TPZ-18200 |
|    |                | 220 | TPZ-18220 |
|    |                | 240 | TPZ-18240 |
| 24 | 12,5           | 60  | TPZ-24060 |
|    |                | 80  | TPZ-24080 |
|    |                | 100 | TPZ-24100 |
|    |                | 120 | TPZ-24120 |
|    |                | 140 | TPZ-24140 |
|    |                | 160 | TPZ-24160 |
|    |                | 180 | TPZ-24180 |
|    |                | 200 | TPZ-24200 |
| 30 | 16,5           | 240 | TPZ-24240 |
|    |                | 80  | TPZ-30080 |
|    |                | 100 | TPZ-30100 |
|    |                | 120 | TPZ-30120 |
|    |                | 140 | TPZ-30140 |
|    |                | 160 | TPZ-30160 |
|    |                | 180 | TPZ-30180 |
|    |                | 220 | TPZ-30220 |
|    |                | 260 | TPZ-30260 |
|    |                | 300 | TPZ-30300 |

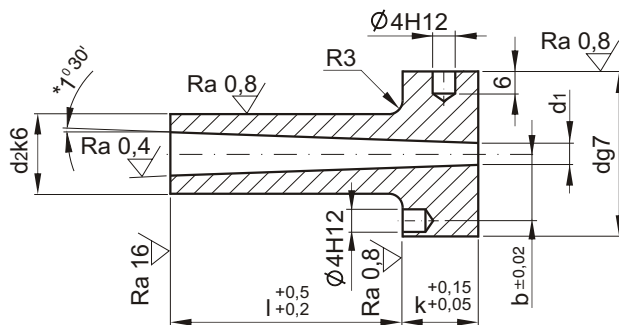
**TZW**


56±2 HRC



| d <sub>2</sub> | d <sub>3</sub> | d  | d <sub>1</sub> | t | l  | L  | NR KAT.  |
|----------------|----------------|----|----------------|---|----|----|----------|
| 12             | 4,5            | 16 | 4              | 7 | 18 | 22 | TZW-1222 |
|                |                |    |                |   |    | 27 | TZW-1227 |
|                |                |    |                |   |    | 36 | TZW-1236 |
|                |                |    |                |   |    | 46 | TZW-1246 |
|                |                |    |                |   |    | 56 | TZW-1256 |
| 18             | 6,5            | 22 | 6              | 7 | 22 | 22 | TZW-1822 |
|                |                |    |                |   | 27 | 27 | TZW-1827 |
|                |                |    |                |   | 28 | 36 | TZW-1836 |
|                |                |    |                |   |    | 46 | TZW-1846 |
|                |                |    |                |   |    | 56 | TZW-1856 |

| d <sub>2</sub> | d <sub>3</sub> | d  | d <sub>1</sub> | t   | l  | L  | NR KAT.  |
|----------------|----------------|----|----------------|-----|----|----|----------|
| 18             | 6,5            | 22 | 6              | 7   | 28 | 66 | TZW-1866 |
|                |                |    |                |     |    | 76 | TZW-1876 |
|                |                |    |                |     |    | 36 | TZW-2436 |
|                |                |    |                |     |    | 46 | TZW-2446 |
|                |                |    |                |     |    | 56 | TZW-2456 |
| 24             | 8,5            | 28 | 8              | 9,5 | 28 | 66 | TZW-2466 |
|                |                |    |                |     |    | 76 | TZW-2476 |
|                |                |    |                |     |    | 86 | TZW-2486 |
|                |                |    |                |     |    | 96 | TZW-2496 |
|                |                |    |                |     |    |    |          |


**TWA**

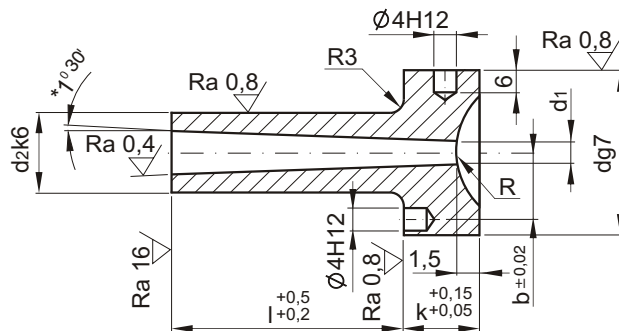
\* Na życzenie oferujemy tuleje  
z kątem  $0,5^\circ$

\* Hole inclination  $0,5^\circ$  on request

55±2 HRC

| $d_2$ | $d$ | $k$ | $b$ | $d_1$ | $l$ | NR KAT     |
|-------|-----|-----|-----|-------|-----|------------|
| 18    | 38  | 18  | 15  | 3,5   | 27  | TWA-183527 |
|       |     |     |     |       | 36  | TWA-183536 |
|       |     |     |     |       | 46  | TWA-183546 |
|       |     |     |     |       | 56  | TWA-183556 |
|       |     |     |     | 4,5   | 27  | TWA-184527 |
|       |     |     |     |       | 36  | TWA-184536 |
|       |     |     |     |       | 46  | TWA-184546 |
|       |     |     |     |       |     |            |

| $d_2$ | $d$ | $k$ | $b$ | $d_1$ | $l$ | NR KAT.    |
|-------|-----|-----|-----|-------|-----|------------|
| 18    | 38  | 18  | 15  | 4,5   | 56  | TWA-184556 |
|       |     |     |     |       | 76  | TWA-184576 |
|       |     |     |     |       |     |            |
| 24    | 48  | 23  | 20  | 4,5   | 46  | TWA-244546 |
|       |     |     |     |       | 56  | TWA-244556 |
|       |     |     |     |       | 76  | TWA-244576 |
| 24    | 48  | 23  | 20  | 6,5   | 56  | TWA-246556 |
|       |     |     |     |       | 76  | TWA-246576 |


**TWB**

\* Na życzenie oferujemy tuleje  
z kątem  $0,5^\circ$

\* Hole inclination  $0,5^\circ$  on request

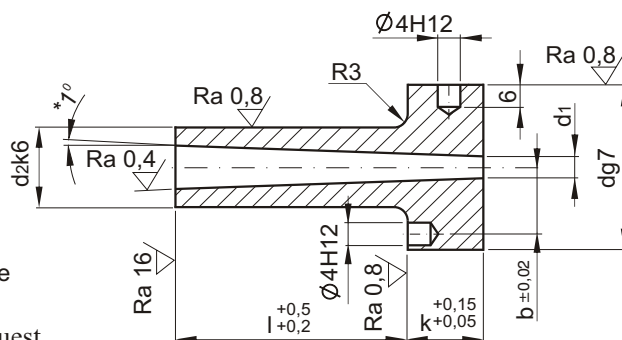
55±2 HRC

| R=15,5 |     |     |     |       |     |                 |
|--------|-----|-----|-----|-------|-----|-----------------|
| $d_2$  | $d$ | $k$ | $b$ | $d_1$ | $l$ | NR KAT.         |
| 18     | 38  | 18  | 15  | 3,5   | 27  | TWB-183527-15,5 |
|        |     |     |     |       | 36  | TWB-183536-15,5 |
|        |     |     |     |       | 46  | TWB-183546-15,5 |
|        |     |     |     |       | 56  | TWB-183556-15,5 |
|        |     |     |     | 4,5   | 27  | TWB-184527-15,5 |
|        |     |     |     |       | 36  | TWB-184536-15,5 |
|        |     |     |     |       | 46  | TWB-184546-15,5 |
|        |     |     |     |       | 56  | TWB-184556-15,5 |
| 24     | 48  | 23  | 20  | 4,5   | 76  | TWB-184576-15,5 |
|        |     |     |     |       | 46  | TWB-244546-15,5 |
|        |     |     |     |       | 56  | TWB-244556-15,5 |
|        |     |     |     |       | 76  | TWB-244576-15,5 |
|        |     |     |     | 6,5   | 56  | TWB-246556-15,5 |
|        |     |     |     |       | 76  | TWB-246576-15,5 |
|        |     |     |     |       |     |                 |
|        |     |     |     |       |     |                 |

| R=40  |     |     |     |       |     |               |
|-------|-----|-----|-----|-------|-----|---------------|
| $d_2$ | $d$ | $k$ | $b$ | $d_1$ | $l$ | NR KAT.       |
| 18    | 38  | 18  | 15  | 3,5   | 27  | TWB-183527-40 |
|       |     |     |     |       | 36  | TWB-183536-40 |
|       |     |     |     |       | 46  | TWB-183546-40 |
|       |     |     |     | 4,5   | 56  | TWB-183556-40 |
|       |     |     |     |       | 27  | TWB-184527-40 |
|       |     |     |     |       | 36  | TWB-184536-40 |
| 24    | 48  | 23  | 20  | 4,5   | 46  | TWB-184546-40 |
|       |     |     |     |       | 56  | TWB-184556-40 |
|       |     |     |     |       | 76  | TWB-184576-40 |
|       |     |     |     | 6,5   | 46  | TWB-244546-40 |
|       |     |     |     |       | 56  | TWB-244556-40 |
|       |     |     |     |       | 76  | TWB-244576-40 |


**TWC**

- \* Na życzenie oferujemy tuleje  
z kątem 0,5°
- \* Hole inclination 0,5° on request



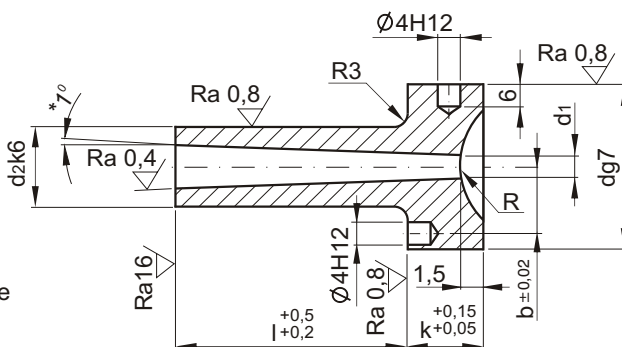
55 ± 2 HRC

| d2 | d  | k  | b  | d1  | l  | NR KAT.    |
|----|----|----|----|-----|----|------------|
| 12 | 28 | 13 | 11 | 2,5 | 22 | TWC-122522 |
|    |    |    |    |     | 27 | TWC-122527 |
|    |    |    |    |     | 36 | TWC-122536 |
|    |    |    |    |     | 46 | TWC-122546 |
|    |    |    |    |     | 56 | TWC-122556 |
|    |    |    |    | 3,5 | 22 | TWC-123522 |
|    |    |    |    |     | 27 | TWC-123527 |
|    |    |    |    |     | 36 | TWC-123536 |
|    |    |    |    |     | 46 | TWC-123546 |
|    |    |    |    |     | 56 | TWC-123556 |
| 18 | 38 | 18 | 15 | 3   | 27 | TWC-183027 |
|    |    |    |    |     | 36 | TWC-183036 |
|    |    |    |    |     | 46 | TWC-183046 |
|    |    |    |    |     | 56 | TWC-183056 |

| d2 | d  | k  | b  | d1 | l   | NR KAT.     |
|----|----|----|----|----|-----|-------------|
| 18 | 38 | 18 | 15 | 3  | 56  | TWC-183056  |
|    |    |    |    |    | 76  | TWC-183076  |
|    |    |    |    |    | 96  | TWC-183096  |
|    |    |    |    |    | 116 | TWC-1830116 |
|    |    |    |    |    | 56  | TWC-184056  |
|    |    |    |    | 4  | 27  | TWC-184027  |
|    |    |    |    |    | 36  | TWC-184036  |
|    |    |    |    |    | 46  | TWC-184046  |
|    |    |    |    |    | 76  | TWC-184076  |
|    |    |    |    |    | 96  | TWC-184096  |
|    |    |    |    |    | 116 | TWC-1840116 |


**TWD**

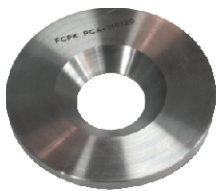
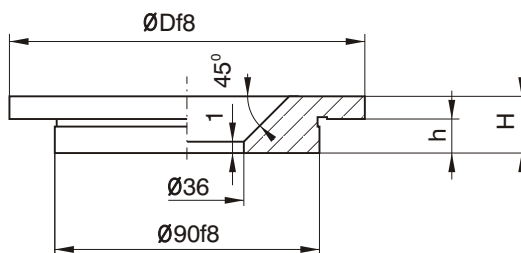
- \* Na życzenie oferujemy tuleje  
z kątem 0,5°
- \* Hole inclination 0,5° on request



55 ± 2 HRC

| R=15,5 |    |    |    |     |     |                  |
|--------|----|----|----|-----|-----|------------------|
| d2     | d  | k  | b  | d1  | l   | NR KAT.          |
| 12     | 28 | 13 | 11 | 2,5 | 22  | TWD-122522-15,5  |
|        |    |    |    |     | 27  | TWD-122527-15,5  |
|        |    |    |    |     | 36  | TWD-122536-15,5  |
|        |    |    |    |     | 46  | TWD-122546-15,5  |
|        |    |    |    |     | 56  | TWD-122556-15,5  |
|        |    |    |    | 3,5 | 22  | TWD-123522-15,5  |
|        |    |    |    |     | 27  | TWD-123527-15,5  |
|        |    |    |    |     | 36  | TWD-123536-15,5  |
|        |    |    |    |     | 46  | TWD-123546-15,5  |
|        |    |    |    |     | 56  | TWD-123556-15,5  |
| 18     | 38 | 18 | 15 | 3   | 27  | TWD-183027-15,5  |
|        |    |    |    |     | 36  | TWD-183036-15,5  |
|        |    |    |    |     | 46  | TWD-183046-15,5  |
|        |    |    |    |     | 56  | TWD-183056-15,5  |
|        |    |    |    |     | 76  | TWD-183076-15,5  |
|        |    |    |    |     | 96  | TWD-183096-15,5  |
|        |    |    |    |     | 116 | TWD-1830116-15,5 |
|        |    |    |    | 4   | 27  | TWD-184027-15,5  |
|        |    |    |    |     | 36  | TWD-184036-15,5  |
|        |    |    |    |     | 46  | TWD-184046-15,5  |
|        |    |    |    |     | 56  | TWD-184056-15,5  |
|        |    |    |    |     | 76  | TWD-184076-15,5  |
|        |    |    |    |     | 96  | TWD-184096-15,5  |
|        |    |    |    |     | 116 | TWD-1840116-15,5 |

| R=40 |    |    |    |     |     |                |
|------|----|----|----|-----|-----|----------------|
| d2   | d  | k  | b  | d1  | l   | NR KAT.        |
| 12   | 28 | 13 | 11 | 2,5 | 22  | TWD-122522-40  |
|      |    |    |    |     | 27  | TWD-122527-40  |
|      |    |    |    |     | 36  | TWD-122536-40  |
|      |    |    |    |     | 46  | TWD-122546-40  |
|      |    |    |    |     | 56  | TWD-122556-40  |
|      |    |    |    | 3,5 | 22  | TWD-123522-40  |
|      |    |    |    |     | 27  | TWD-123527-40  |
|      |    |    |    |     | 36  | TWD-123536-40  |
|      |    |    |    |     | 46  | TWD-123546-40  |
|      |    |    |    |     | 56  | TWD-123556-40  |
| 18   | 38 | 18 | 15 | 3   | 27  | TWD-183027-40  |
|      |    |    |    |     | 36  | TWD-183036-40  |
|      |    |    |    |     | 46  | TWD-183046-40  |
|      |    |    |    |     | 56  | TWD-183056-40  |
|      |    |    |    |     | 76  | TWD-183076-40  |
|      |    |    |    |     | 96  | TWD-183096-40  |
|      |    |    |    |     | 116 | TWD-1830116-40 |
|      |    |    |    | 4   | 27  | TWD-184027-40  |
|      |    |    |    |     | 36  | TWD-184036-40  |
|      |    |    |    |     | 46  | TWD-184046-40  |
|      |    |    |    |     | 56  | TWD-184056-40  |
|      |    |    |    |     | 76  | TWD-184076-40  |
|      |    |    |    |     | 96  | TWD-184096-40  |
|      |    |    |    |     | 116 | TWD-1840116-40 |

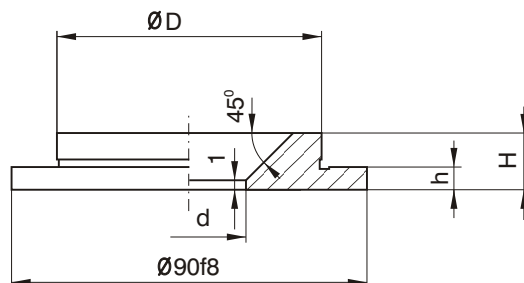

**PCA**


| h    | D          | H           | NR KAT.    |
|------|------------|-------------|------------|
| 4    | <b>100</b> | <b>8</b>    | PCA-100080 |
| 7    |            | <b>11</b>   | PCA-100110 |
| 9    |            | <b>13</b>   | PCA-100130 |
| 11   |            | <b>15</b>   | PCA-100150 |
| 12.5 | <b>110</b> | <b>16.5</b> | PCA-100165 |
| 4    |            | <b>8</b>    | PCA-110080 |
| 7    |            | <b>11</b>   | PCA-110110 |
| 4    |            | <b>12</b>   | PCA-110120 |
| 9    |            | <b>13</b>   | PCA-110130 |
| 11   |            | <b>15</b>   | PCA-110150 |
| 12.5 |            | <b>16.5</b> | PCA-110165 |

| h    | D          | H           | NR KAT.    |
|------|------------|-------------|------------|
| 4    | <b>120</b> | <b>8</b>    | PCA-120080 |
| 7    |            | <b>11</b>   | PCA-120110 |
| 4    |            | <b>12</b>   | PCA-120120 |
| 9    |            | <b>13</b>   | PCA-120130 |
| 11   | <b>125</b> | <b>15</b>   | PCA-120150 |
| 12.5 |            | <b>16.5</b> | PCA-120165 |
| 4    |            | <b>8</b>    | PCA-125080 |
| 7    |            | <b>11</b>   | PCA-125110 |
| 4    |            | <b>12</b>   | PCA-125120 |
| 9    |            | <b>13</b>   | PCA-125130 |
| 11   |            | <b>15</b>   | PCA-125150 |

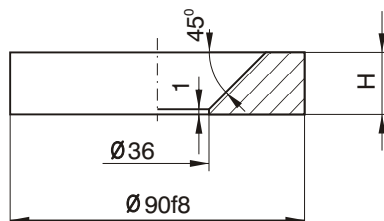
| h    | D          | H           | NR KAT.    |
|------|------------|-------------|------------|
| 12.5 | <b>125</b> | <b>16.5</b> | PCA-125165 |
| 4    |            | <b>130</b>  | PCA-130120 |
|      |            | <b>140</b>  | PCA-140120 |
|      |            | <b>150</b>  | PCA-150120 |
|      | <b>160</b> | <b>8</b>    | PCA-160080 |
| 7    |            | <b>11</b>   | PCA-160110 |
| 4    |            | <b>12</b>   | PCA-160120 |
| 9    |            | <b>13</b>   | PCA-160130 |
| 11   |            | <b>15</b>   | PCA-160150 |
| 12.5 |            | <b>16.5</b> | PCA-160165 |
| 4    | <b>175</b> | <b>8</b>    | PCA-175080 |

| h    | D          | H           | NR KAT.    |
|------|------------|-------------|------------|
| 7    | <b>175</b> | <b>11</b>   | PCA-175110 |
| 4    |            | <b>12</b>   | PCA-175120 |
| 9    |            | <b>13</b>   | PCA-175130 |
| 11   |            | <b>15</b>   | PCA-175150 |
| 12.5 | <b>180</b> | <b>16.5</b> | PCA-175165 |
| 4    |            | <b>12</b>   | PCA-180120 |
|      |            | <b>200</b>  | PCA-200120 |
|      |            | <b>250</b>  | PCA-250120 |


**PCA**


| d  | h | D         | H         | NR KAT.    |
|----|---|-----------|-----------|------------|
| 36 | 4 | <b>60</b> | <b>8</b>  | PCA-060080 |
| 26 | 7 |           | <b>11</b> | PCA-060110 |
|    | 9 |           | <b>13</b> | PCA-060130 |

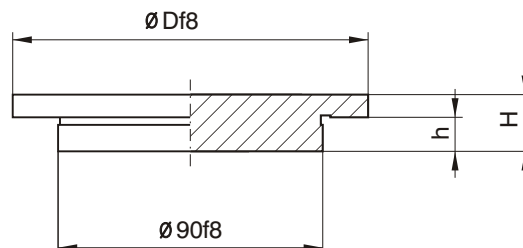
| d  | h | D         | H         | NR KAT.    |
|----|---|-----------|-----------|------------|
| 36 | 4 | <b>80</b> | <b>8</b>  | PCA-080080 |
| 26 | 7 |           | <b>11</b> | PCA-080110 |
|    | 9 |           | <b>13</b> | PCA-080130 |


**PCA**


| H         | NR KAT.    |
|-----------|------------|
| <b>8</b>  | PCA-090080 |
| <b>11</b> | PCA-090110 |
| <b>13</b> | PCA-090130 |

| H           | NR KAT.    |
|-------------|------------|
| <b>15</b>   | PCA-090150 |
| <b>16.5</b> | PCA-090165 |



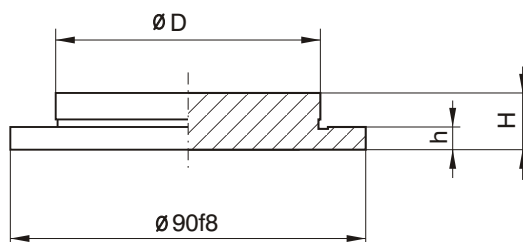

**PCB**

| h    | D   | H    | NR KAT.    |
|------|-----|------|------------|
| 4    | 100 | 8    | PCB-100080 |
| 7    |     | 11   | PCB-100110 |
| 9    |     | 13   | PCB-100130 |
| 11   |     | 15   | PCB-100150 |
| 12.5 | 110 | 16.5 | PCB-110080 |
| 4    |     | 8    | PCB-110110 |
| 7    |     | 11   | PCB-110120 |
| 9    |     | 13   | PCB-110130 |
| 11   |     | 15   | PCB-110150 |

| h    | D   | H    | NR KAT.    |
|------|-----|------|------------|
| 12.5 | 120 | 16.5 | PCB-120080 |
| 4    |     | 8    | PCB-120110 |
| 7    |     | 11   | PCB-120120 |
| 9    |     | 13   | PCB-120130 |
| 11   | 125 | 15   | PCB-120150 |
| 12.5 |     | 16.5 | PCB-125080 |
| 4    |     | 8    | PCB-125110 |
| 7    |     | 11   | PCB-125120 |
| 11   |     | 12   | PCB-125150 |

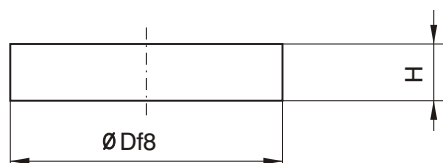
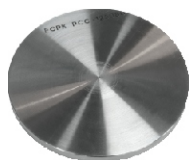
| h    | D   | H    | NR KAT.    |
|------|-----|------|------------|
| 9    | 140 | 13   | PCB-140080 |
| 11   |     | 15   | PCB-140110 |
| 12.5 |     | 16.5 | PCB-140130 |
| 4    |     | 8    | PCB-140150 |
| 7    | 150 | 11   | PCB-150080 |
| 9    |     | 13   | PCB-150110 |
| 11   |     | 15   | PCB-150130 |
| 12.5 |     | 16.5 | PCB-150150 |

| h    | D   | H    | NR KAT.    |
|------|-----|------|------------|
| 12.5 | 160 | 16.5 | PCB-160080 |
| 4    |     | 8    | PCB-160110 |
| 7    |     | 11   | PCB-160120 |
| 9    |     | 13   | PCB-160130 |
| 11   | 175 | 15   | PCB-175080 |
| 12.5 |     | 16.5 | PCB-175110 |
| 4    |     | 8    | PCB-175120 |
| 7    |     | 11   | PCB-175130 |
| 9    | 200 | 12   | PCB-200080 |
| 11   |     | 15   | PCB-200110 |
| 12.5 |     | 16.5 | PCB-200130 |
| 4    |     | 8    | PCB-250120 |


**PCB**

| h | D  | H  | NR KAT.    |
|---|----|----|------------|
| 4 | 60 | 8  | PCB-060080 |
| 7 |    | 11 | PCB-060110 |
| 9 |    | 13 | PCB-060130 |

| h | D  | H  | NR KAT.    |
|---|----|----|------------|
| 4 | 80 | 8  | PCB-080080 |
| 7 |    | 11 | PCB-080110 |
| 9 |    | 13 | PCB-080130 |


**PCC**

| D  | H  | NR KAT.    |
|----|----|------------|
| 40 | 6  | PCC-040060 |
|    | 9  | PCC-040090 |
| 60 | 8  | PCC-060080 |
|    | 11 | PCC-060110 |
|    | 13 | PCC-060130 |
| 80 | 8  | PCC-080080 |
|    | 11 | PCC-080110 |
|    | 13 | PCC-080130 |

| D   | H    | NR KAT.    |
|-----|------|------------|
| 90  | 8    | PCC-090080 |
|     | 11   | PCC-090110 |
|     | 13   | PCC-090130 |
|     | 15   | PCC-090150 |
| 100 | 16.5 | PCC-100165 |
|     | 8    | PCC-100080 |
|     | 11   | PCC-110080 |
| 110 | 12   | PCC-110120 |

| D   | H  | NR KAT.    |
|-----|----|------------|
| 120 | 8  | PCC-120080 |
|     | 12 | PCC-120120 |
| 125 | 8  | PCC-125080 |
|     | 12 | PCC-125120 |
|     | 13 | PCC-130120 |
| 130 | 12 | PCC-130120 |
| 140 | 8  | PCC-140120 |
| 150 | 8  | PCC-150080 |
|     | 12 | PCC-150120 |

| D   | H  | NR KAT.    |
|-----|----|------------|
| 160 | 8  | PCC-160080 |
|     | 12 | PCC-160120 |
| 175 | 8  | PCC-175080 |
|     | 12 | PCC-175120 |
| 200 | 8  | PCC-200080 |
|     | 12 | PCC-200120 |
| 250 | 12 | PCC-250120 |