

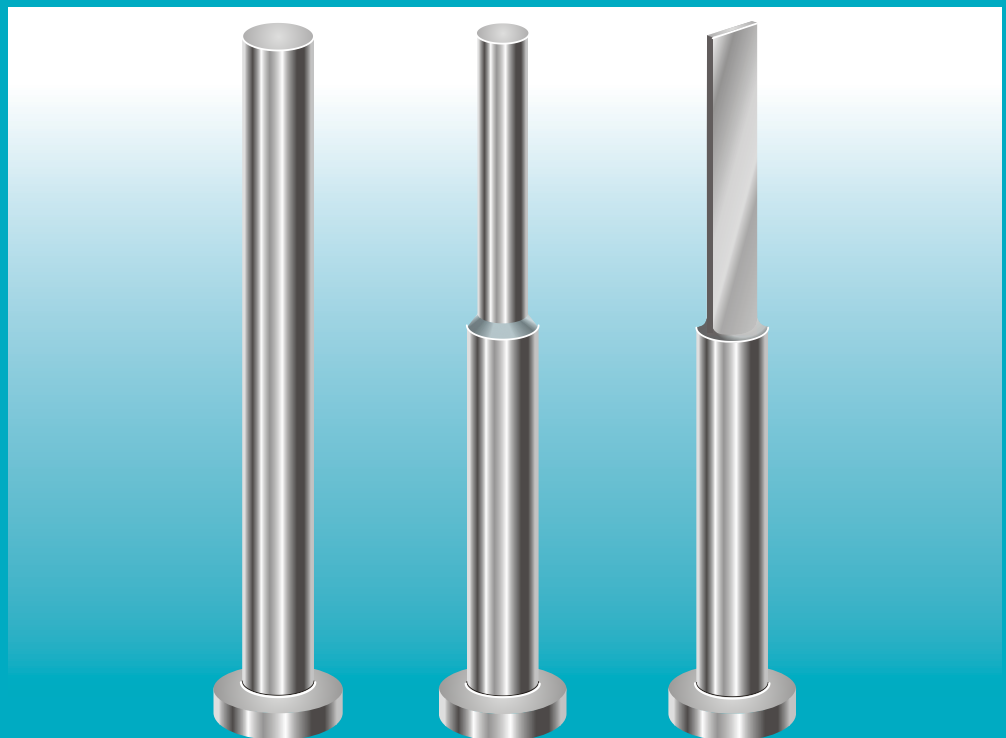


FCPK Bytów Sp. z o.o.












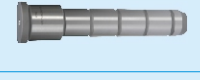




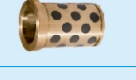
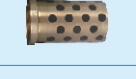

ul. Lęborska 26, 77-100 Bytów, Poland
tel. +48-59-822-9700, fax +48-59-822-9701
www.fcpk.pl

CZĘŚCI ZNORMALIZOWANE DO FORM

STANDARD ELEMENTS FOR MOLDS



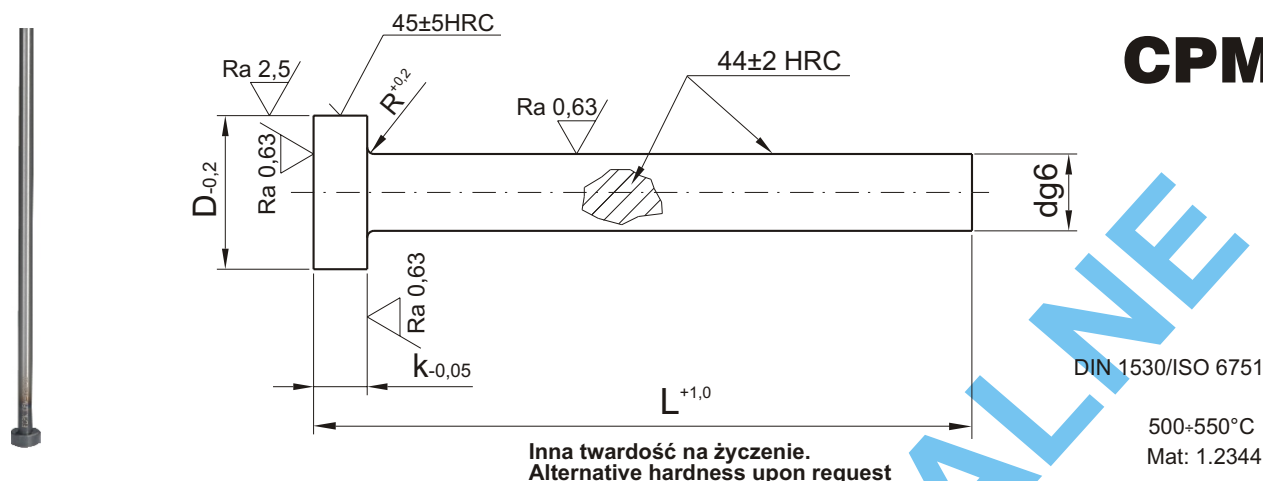
CZĘŚCI ZNORMALIZOWANE DO FORM
STANDARD ELEMENTS FOR MOLDS

| | 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 hartowany | Flat ejector pins hardened | OHP...R | 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 |

CZĘŚCI ZNORMALIZOWANE DO FORM
STANDARD ELEMENTS FOR MOLDS

| | NAZWA KATALOGOWA | CATALOG NAME | SYMBOL | STR./PG |
|---|------------------------------------|---------------------------------|------------|---------|
|  | Nóżka | Feet | NF- | B.26 |
|  | 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 |

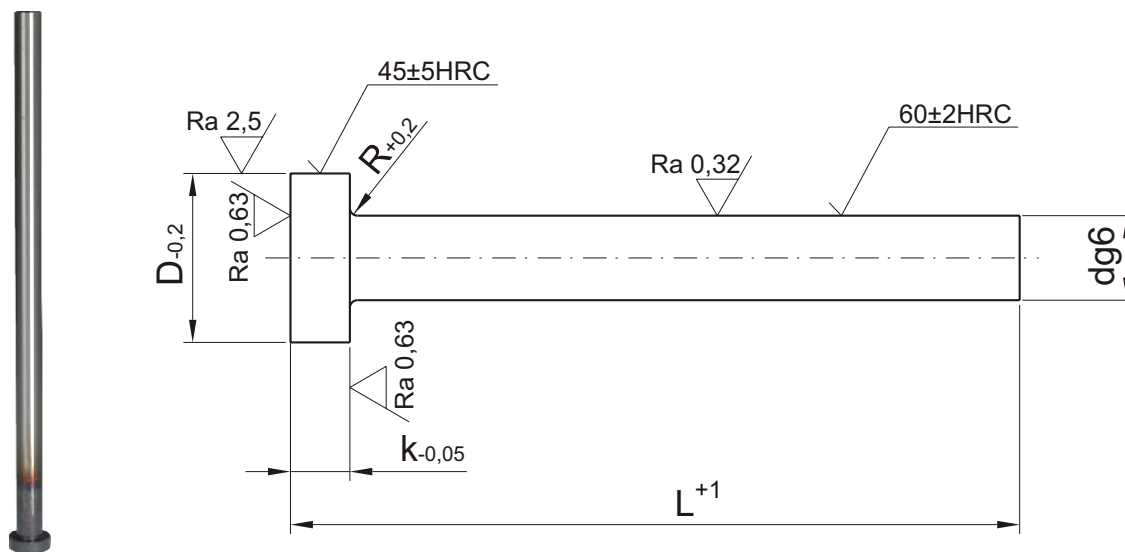
CPM



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 | 0,2 | 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 | 2 | 0,2 | CPM-025100 | CPM-025125 | CPM-025160 | CPM-025200 | CPM-025250 | | | | | | | | | | |
| 2,7 | CPM-027100 | | | CPM-027125 | CPM-027160 | CPM-027200 | CPM-027250 | | | | | | | | | | | |
| 3 | 6 | 2 | 0,2 | 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 | 2 | 0,2 | 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 | 3 | 0,3 | 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 | 8 | 3 | 0,3 | CPM-045100 | CPM-045125 | CPM-045160 | CPM-045200 | CPM-045250 | CPM-045315 | CPM-045400 | | | | | | | | |
| 5 | | | | CPM-050100 | CPM-050125 | CPM-050160 | CPM-050200 | CPM-050250 | CPM-050315 | CPM-050400 | CPM-050500 | CPM-050630 | CPM-050800 | | | | | |
| 5,2 | 10 | 3 | 0,3 | 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 | 12 | 5 | 0,5 | 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 | 14 | 5 | 0,5 | 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 | 14 | 5 | 0,5 | CPM-082100 | CPM-082125 | CPM-082160 | CPM-082200 | CPM-082250 | CPM-082315 | CPM-082400 | CPM-082500 | CPM-082630 | CPM-082800 | | | | | |
| 8,5 | | | | CPM-085100 | CPM-085125 | CPM-085160 | CPM-085200 | CPM-085250 | CPM-085315 | CPM-085400 | CPM-085500 | CPM-085630 | | | | | | |
| 9 | 16 | 5 | 0,5 | 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 | 16 | 5 | 0,5 | 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 | 18 | 7 | 0,8 | CPM-105100 | CPM-105125 | CPM-105160 | CPM-105200 | CPM-105250 | CPM-105315 | CPM-105400 | CPM-105500 | CPM-105630 | | | | | | |
| 11 | | | | CPM-110100 | CPM-110125 | CPM-110160 | CPM-110200 | CPM-110250 | CPM-110315 | CPM-110400 | CPM-110500 | CPM-110630 | | | | | | |
| 12 | 22 | 7 | 0,8 | 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 | 24 | 7 | 0,8 | CPM-125100 | CPM-125125 | CPM-125160 | CPM-125200 | CPM-125250 | CPM-125315 | CPM-125400 | CPM-125500 | CPM-125630 | CPM-125800 | | | | | |
| 14 | | | | CPM-140100 | CPM-140125 | CPM-140160 | CPM-140200 | CPM-140250 | CPM-140315 | CPM-140400 | CPM-140500 | CPM-140630 | CPM-140800 | CPM-1401000 | | | | |
| 16 | 26 | 8 | 1 | CPM-160100 | CPM-160125 | CPM-160160 | CPM-160200 | CPM-160250 | CPM-160315 | CPM-160400 | CPM-160500 | CPM-160630 | CPM-160800 | CPM-1601000 | | | | |
| 18 | | | | CPM-180100 | CPM-180125 | CPM-180160 | CPM-180200 | CPM-180250 | CPM-180315 | CPM-180400 | CPM-180500 | CPM-180630 | CPM-180800 | CPM-1801000 | | | | |
| 20 | 32 | 10 | 1 | CPM-200100 | CPM-200125 | CPM-200160 | CPM-200200 | CPM-200250 | CPM-200315 | CPM-200400 | CPM-200500 | CPM-200630 | CPM-200800 | CPM-2001000 | | | | |
| 25 | | | | | | | CPM-250160 | CPM-250200 | CPM-250250 | CPM-250315 | CPM-250400 | CPM-250500 | CPM-250630 | CPM-250800 | CPM-2501000 | | | |
| 32 | 40 | 10 | 1 | | | CPM-320160 | CPM-320200 | CPM-320250 | CPM-320315 | CPM-320400 | CPM-320500 | CPM-320630 | CPM-320800 | CPM-3201000 | | | | |
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WH



DIN 1530/ISO 6751
250°C

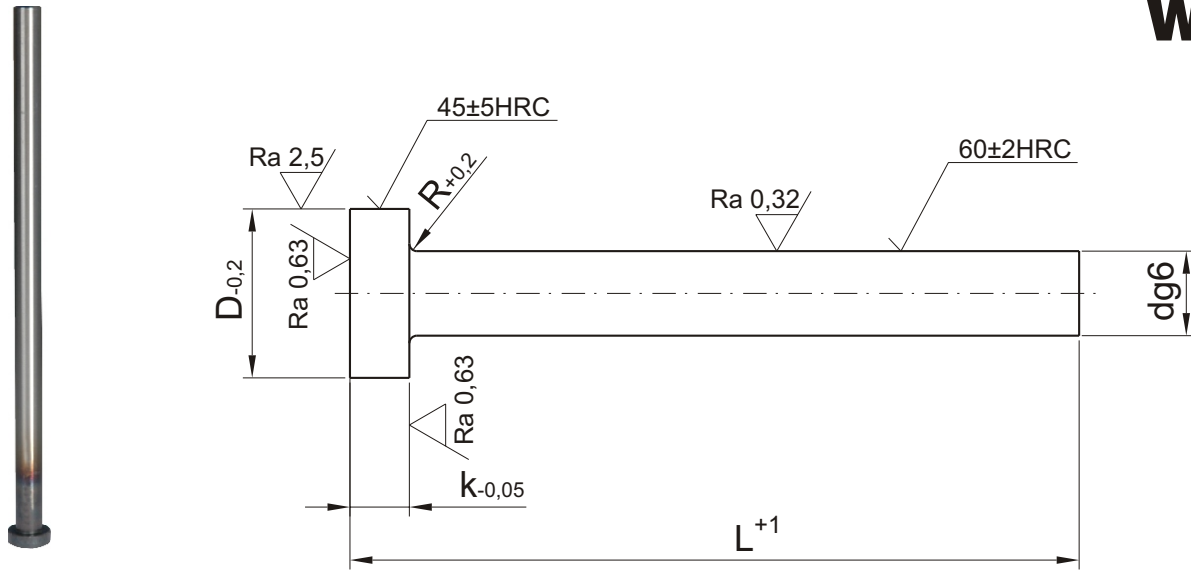
Mat: 1.2210

Hartowany:
Hardened: 60±2 HRC

| 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 | | 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 | | | WH-030080 | WH-030100 | WH-030125 | WH-030160 | WH-030200 | WH-030250 | WH-030315 | | | |
| 3,1 | 6 | | | | | 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 | | | | | | WH-041160 | | | | | | |
| 4,2 | 8 | | 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

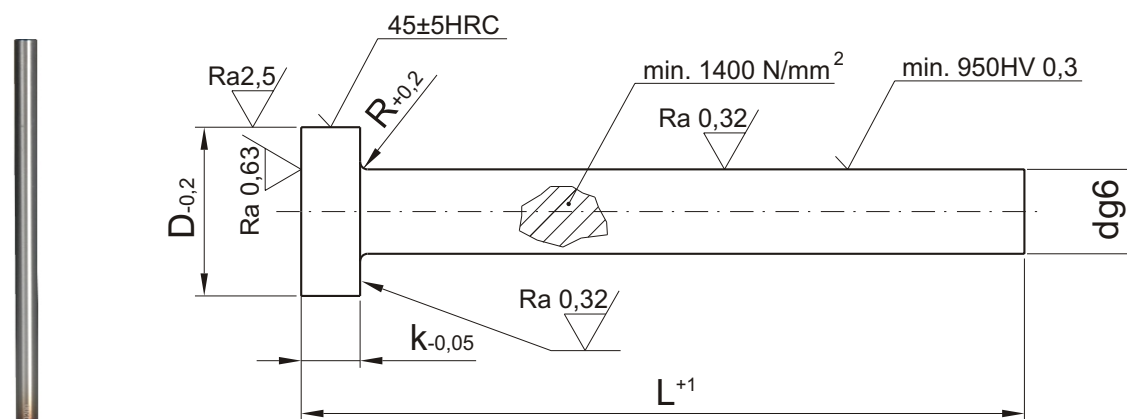


DIN 1530/ISO 6751
250°C

Mat: 1.2210
Hartowany: 60±2 HRC
Hardened:

| 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 | 5 | 0,5 | WH-080080 | WH-080100 | WH-080125 | WH-080160 | WH-080200 | WH-080250 | WH-080315 | WH-080400 | | | |
| 8,1 | | | | | | | | | | | | | | |
| 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 | | | | | | | | | | | | | | |
| 10 | 16 | 5 | 0,5 | WH-100080 | WH-100100 | WH-100125 | WH-100160 | WH-100200 | WH-100250 | WH-100315 | WH-100400 | | | |
| 10,1 | | | | | | | | | | | | | | |
| 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 | | | | | | | | | | | | | | |
| 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 | | | | | | | | | | | | | | |
| 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 | 7 | 0,8 | 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 | 7 | 0,8 | | 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 | | |
| 25 | 32 | 10 | 1 | | | | WH-250160 | WH-250200 | WH-250250 | WH-250315 | WH-250400 | WH-250500 | | |

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



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

| d | D | k | R |
|-----|---|---|-----|
| 3 | 6 | | 0,3 |
| 3,1 | | | |
| 3,2 | | | |
| 3,5 | 7 | 3 | 0,3 |
| 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
500÷550°C

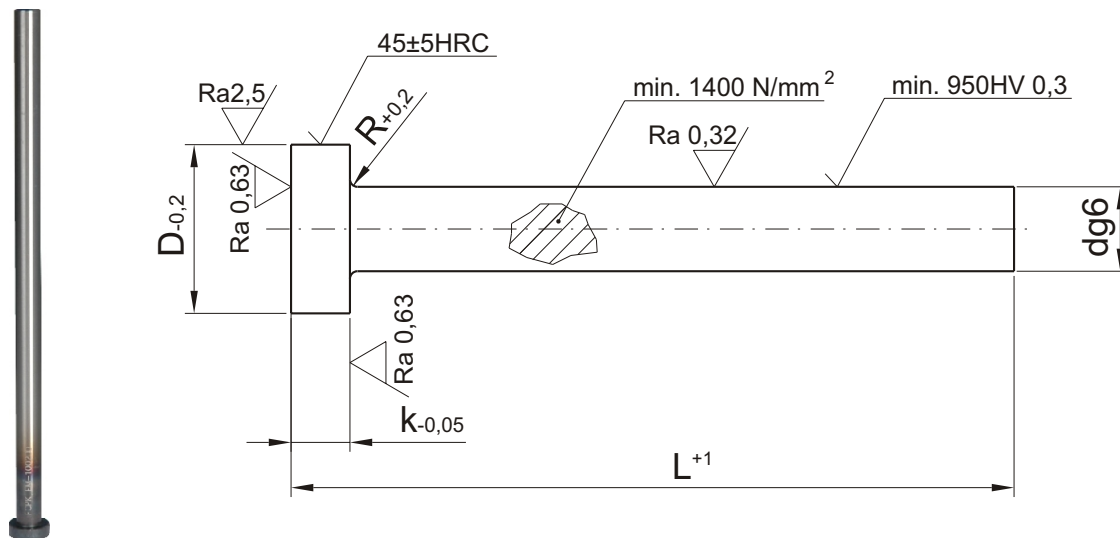
Mat: 1.2344
Azotowany
Nitrided

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 | 16 | | |
| 10 | | | |

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

| d | D | k | R |
|------|----|----|-----|
| 14,2 | 22 | 7 | 0,8 |
| 16 | | | |
| 16,2 | | | |
| 18 | 24 | 8 | |
| 20 | 26 | | |
| 25 | 32 | 10 | 1 |
| 32 | 40 | | |

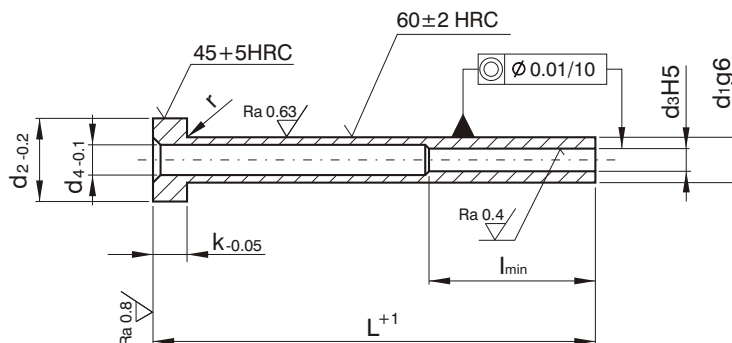
DIN 1530/ISO 6751
500÷550°C

Mat: 1.2344
Azotowany
Nitrided

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 |

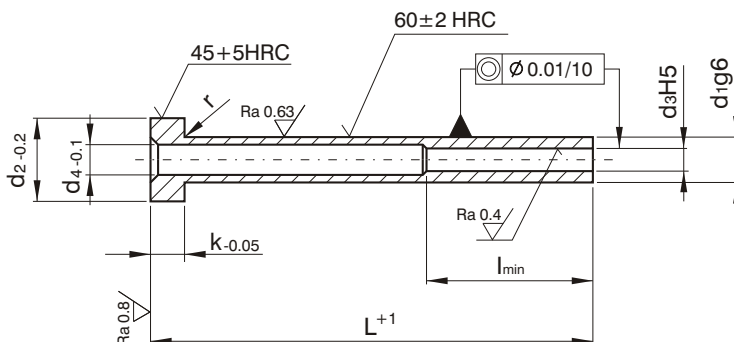
Uwaga. Inne wymiary na zapytanie
Note. Other dimensions on request.



Mat: 1.2210

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

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

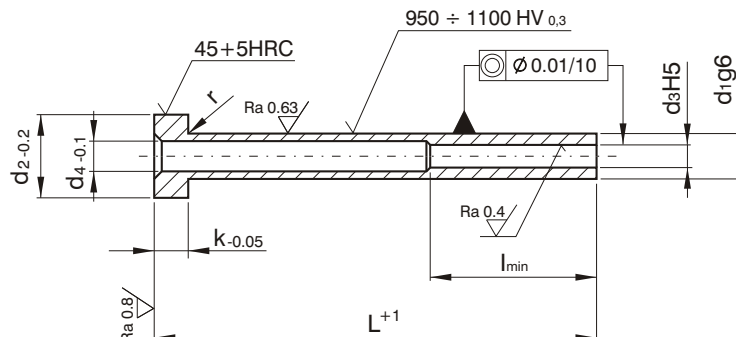


Mat: 1.2210

| d3 | d1 | d2 | k | d4 | l _{min} | 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 | 3 | 2,5 | 35 | | WHT-02004200 | WHT-02004225 | WHT-02004250 |
| 2,2 | | | | WHT-02204175 | | WHT-02204200 | WHT-02204225 | WHT-02204250 | |
| 2,5 | 5 | 10 | 3 | 3,0 | 35 | WHT-02505175 | WHT-02505200 | WHT-02505225 | WHT-02505250 |
| 2,7 | | | | 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 | | | | WHT-03205175 | | WHT-03205200 | WHT-03205225 | WHT-03205250 | |
| 3,5 | 8 | 14 | 5 | 4,0 | 45 | WHT-03506175 | WHT-03506200 | WHT-03506225 | WHT-03506250 |
| 3,7 | | | | WHT-03706175 | | WHT-03706200 | WHT-03706225 | ---- | |
| 4,0 | 10 | 16 | 5 | 4,5 | 45 | WHT-04006175 | WHT-04006200 | WHT-04006225 | WHT-04006250 |
| 4,0 | | | | WHT-04008175 | | WHT-04008200 | WHT-04008225 | WHT-04008250 | |
| 4,2 | 12 | 20 | 7 | 4,5 | 50 | WHT-04208175 | WHT-04208200 | WHT-04208225 | WHT-04208250 |
| 5,0 | | | | WHT-05008175 | | WHT-05008200 | WHT-05008225 | WHT-05008250 | |
| 5,2 | 14 | 22 | 7 | 5,5 | 50 | WHT-05208175 | WHT-05208200 | WHT-05208225 | WHT-05208250 |
| 5,5 | | | | WHT-05508175 | | WHT-05508200 | WHT-05508225 | WHT-05508250 | |
| 6,0 | 16 | 22 | 7 | 6,5 | 50 | WHT-06010175 | WHT-06010200 | WHT-06010225 | WHT-06010250 |
| 6,2 | | | | WHT-06210175 | | WHT-06210200 | WHT-06210225 | WHT-06210250 | |
| 6,5 | 20 | 20 | 7 | 7,0 | 50 | WHT-06510175 | WHT-06510200 | WHT-06510225 | WHT-06510250 |
| 7,0 | | | | ---- | | WHT-07010200 | WHT-07010225 | WHT-07010250 | |
| 8,0 | 12 | 20 | 7 | 8,5 | 50 | WHT-08012175 | WHT-08012200 | WHT-08012225 | WHT-08012250 |
| 8,2 | | | | WHT-08212175 | | WHT-08212200 | WHT-08212225 | WHT-08212250 | |
| 8,5 | 14 | 22 | 7 | 9,0 | 50 | ---- | WHT-08512200 | ---- | ---- |
| 10,0 | | | | WHT-10014175 | | WHT-10014200 | WHT-10014225 | WHT-10014250 | |
| 10,5 | 16 | 22 | 7 | 11,0 | 50 | WHT-10514175 | WHT-10514200 | WHT-10514225 | WHT-10514250 |
| 11,0 | | | | WHT-11014175 | | WHT-11014200 | WHT-11014225 | ---- | |
| 12,0 | 20 | 20 | 7 | 12,5 | 50 | WHT-12016175 | WHT-12016200 | WHT-12016225 | WHT-12016250 |
| 12,5 | | | | WHT-12516175 | | WHT-12516200 | WHT-12516225 | WHT-12516250 | |

| d3 | d1 | d2 | k | d4 | l _{min} | L | | | |
|------|----|----|---|--------------|------------------|--------------|--------------|--------------|-----|
| | | | | | | 275 | 300 | 325 | 350 |
| 2,5 | 5 | 10 | 3 | 3,0 | 35 | WHT-02505275 | | | |
| 2,7 | | | | WHT-02705275 | | | | | |
| 3,0 | 6 | 12 | 3 | 3,5 | 45 | WHT-03005275 | WHT-03005300 | | |
| 3,2 | | | | WHT-03205275 | | WHT-03205300 | | | |
| 3,5 | 8 | 14 | 5 | 4,0 | 45 | WHT-03506275 | WHT-03506300 | | |
| 4,0 | | | | WHT-04006275 | | WHT-04006300 | | | |
| 4,2 | 10 | 16 | 5 | 4,5 | 50 | WHT-04208275 | ---- | | |
| 5,0 | | | | WHT-05008275 | | WHT-05008300 | WHT-05008325 | | |
| 5,2 | 12 | 20 | 7 | 5,5 | 50 | WHT-05208275 | WHT-05208300 | WHT-05208325 | |
| 5,5 | | | | WHT-05508275 | | ---- | ---- | | |
| 6,0 | 14 | 22 | 7 | 6,5 | 50 | WHT-06010275 | WHT-06010300 | WHT-06010325 | |
| 6,2 | | | | WHT-06210275 | | ---- | ---- | | |
| 8,0 | 16 | 22 | 7 | 8,5 | 50 | WHT-08012275 | WHT-08012300 | ---- | |
| 8,2 | | | | WHT-08212275 | | ---- | ---- | | |
| 10,0 | 20 | 20 | 7 | 10,5 | 50 | WHT-10014275 | WHT-10014300 | WHT-10014325 | |
| 12,0 | | | | WHT-12016275 | | | | | |

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



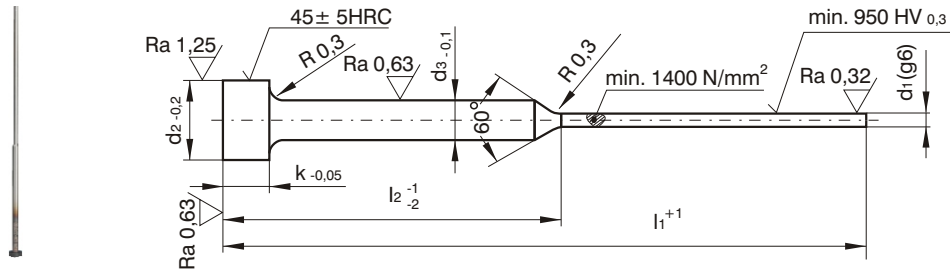
Mat: 1.2344

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

| d3 | d1 | d2 | k | d4 | l _{min} | L | | | |
|------|----|----|---|------|------------------|--------------|--------------|--------------|--------------|
| | | | | | | 200 | 225 | 250 | 275 |
| 2,0 | 4 | 8 | 3 | 2,5 | 35 | EMT-02004200 | | | |
| 3,0 | 5 | 10 | | 3,5 | 35 | EMT-03005200 | EMT-03005225 | | |
| 3,2 | 6 | 12 | 5 | 4,0 | 45 | EMT-03205200 | EMT-03205225 | | |
| 3,5 | | | | 4,0 | 45 | EMT-03506200 | --- | | |
| 4,0 | 8 | 14 | 5 | 4,5 | 45 | EMT-04006200 | EMT-04006225 | | |
| 4,2 | | | | 4,5 | 45 | EMT-04208200 | EMT-04208225 | | |
| 5,0 | 10 | 16 | 7 | 5,5 | 45 | EMT-05008200 | EMT-05008225 | | |
| 5,2 | | | | 5,5 | 45 | EMT-05208200 | EMT-05208225 | | |
| 6,0 | 12 | 20 | 7 | 6,5 | 45 | EMT-06010200 | EMT-06010225 | EMT-06010250 | |
| 6,2 | | | | 6,5 | 45 | EMT-06210200 | EMT-06210225 | EMT-06210250 | |
| 8,0 | 14 | 22 | 7 | 8,5 | 50 | EMT-08012200 | EMT-08012225 | EMT-08012250 | EMT-08012275 |
| 8,2 | | | | 8,5 | 50 | EMT-08212200 | EMT-08212225 | EMT-08212250 | EMT-08212275 |
| 10,0 | 16 | | 7 | 10,5 | 50 | EMT-10014200 | EMT-10014225 | EMT-10014250 | EMT-10014275 |
| 10,2 | | | | 10,5 | 50 | EMT-10214200 | EMT-10214225 | EMT-10214250 | EMT-10214275 |
| 10,5 | | | 7 | 11,0 | 50 | EMT-10514200 | EMT-10514225 | --- | --- |
| 12,0 | | | | 12,5 | 50 | EMT-12016200 | EMT-12016225 | EMT-12016250 | EMT-12016275 |
| 12,5 | | | | 13,0 | | EMT-12516200 | EMT-12516225 | EMT-12516250 | EMT-12516275 |

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

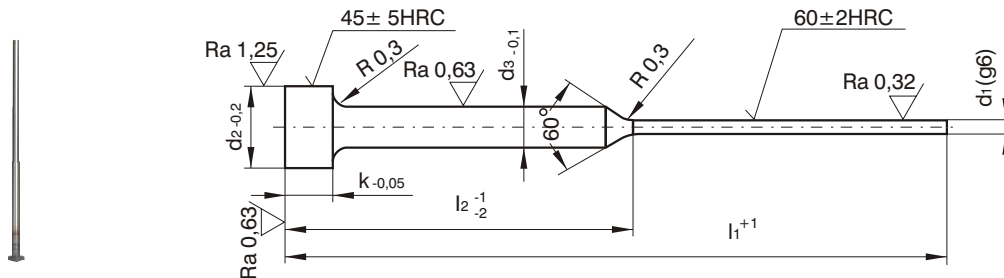


ESM

Mat: 1.2344
Azotowany
Nitrided

DIN 1530 FORM C-WAS
500÷550°C

| d1 | d2 | d3 | k | NR KAT. | | | | |
|-----|----|-------------|-------------|----------------|-----------------|-----------------|-----------------|-----------------|
| | | | | I2=35 I1=80 | I2=50 I1=100 | I2=50 I1=125 | I2=75 I1=160 | I2=75 I1=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

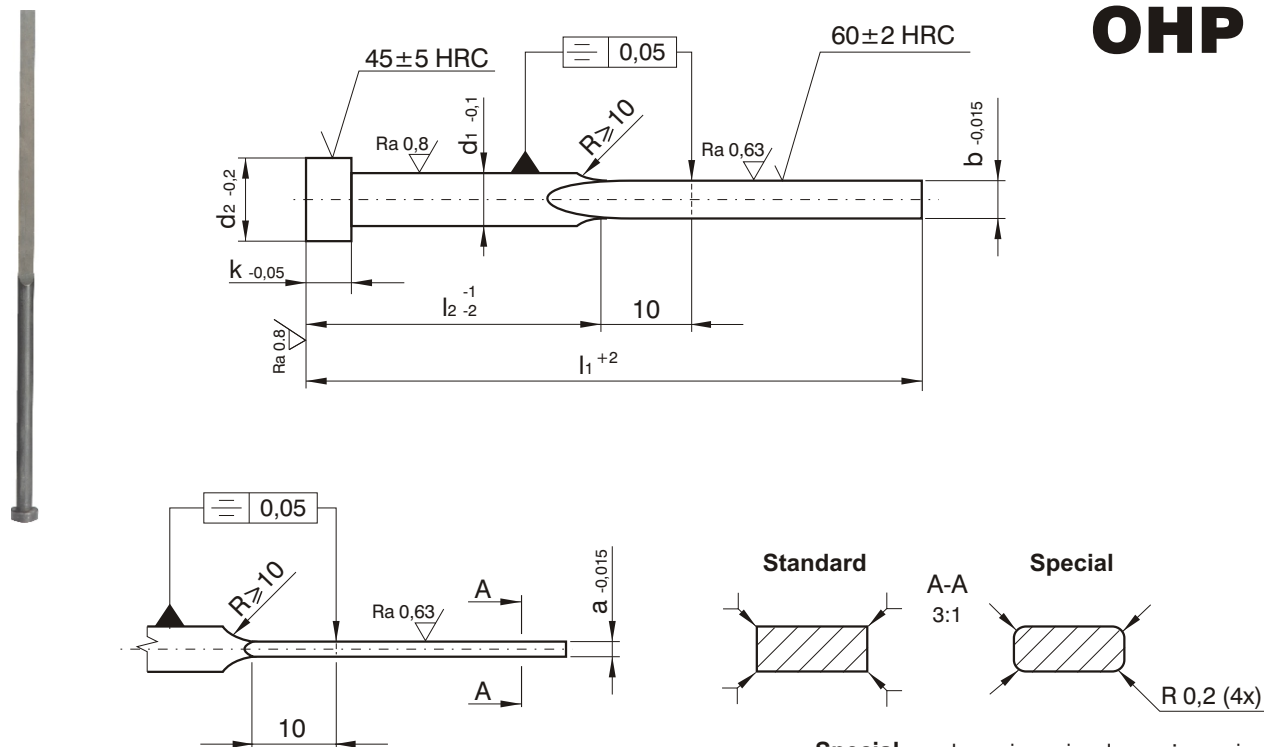
Mat: 1.2210

DIN 1530 FORM C-WAS
250°C

| d1 | d2 | d3 | k | NR KAT. | | | | |
|-----|----|-------------|-------------|----------------|-----------------|-----------------|-----------------|-----------------|
| | | | | I2=35 I1=80 | I2=50 I1=100 | I2=50 I1=125 | I2=75 I1=160 | I2=75 I1=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



Mat: 1.2210

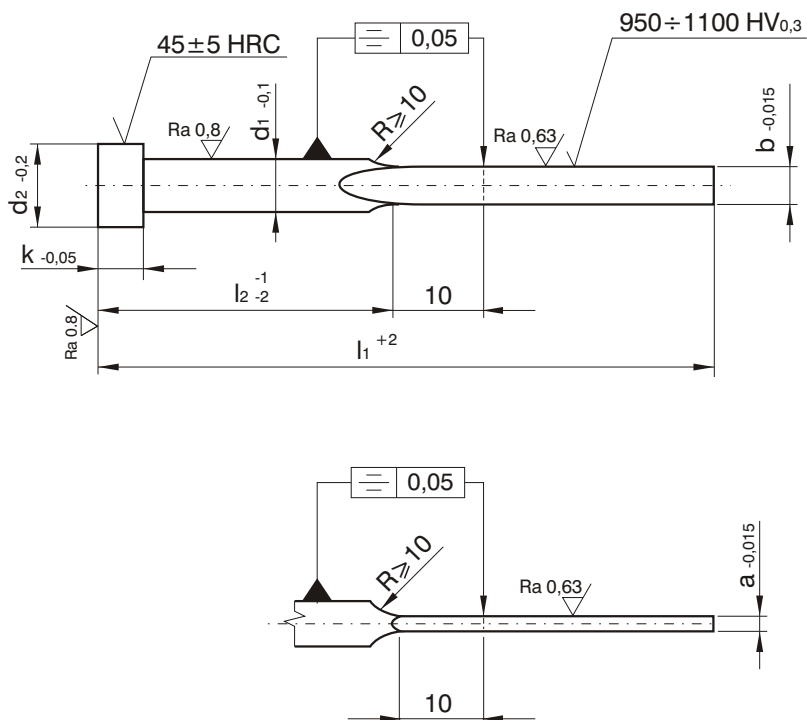
Special - wykonanie opcjonalne na życzenie
- optional execution on request

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

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



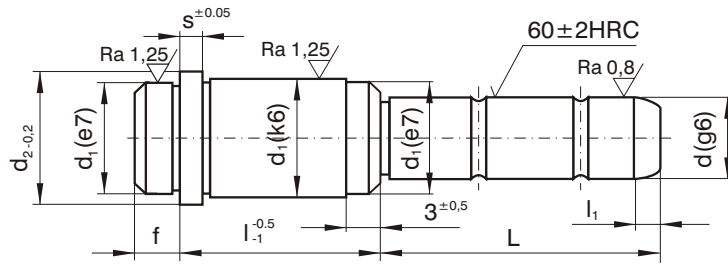
Mat: 1.2344

Azotowany
Nitrided

| b | a | d ₁ | d ₂ | k | NR KATALOGOWY | | | | |
|-----|-----|----------------|----------------|---|--------------------|---------------------|---------------------|---------------------|---------------------|
| | | | | | I ₁ =80 | I ₁ =100 | I ₁ =125 | I ₁ =160 | I ₁ =200 |
| | | | | | l ₂ =40 | l ₂ =50 | l ₂ =60 | l ₂ =80 | l ₂ =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 ₁ | d ₂ | k | NR KATALOGOWY | | | | | |
|------|-----|----------------|----------------|---|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|
| | | | | | I ₁ =125 | I ₁ =160 | I ₁ =200 | I ₁ =250 | I ₁ =315 | I ₁ =400 |
| | | | | | l ₂ =60 | l ₂ =80 | l ₂ =100 | l ₂ =125 | l ₂ =160 | l ₂ =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.

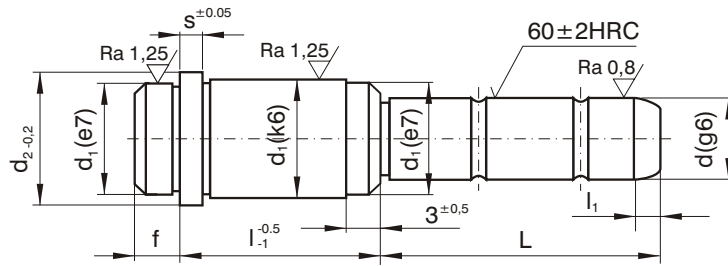


SLE

Mat: 1.7131
Nawęglany
Carbonized

| d | d ₁ | d ₂ | s | f | l ₁ | l | L | NR KAT. | NR KAT. | | | | | | |
|------|----------------|----------------|--------------|---|----------------|-------|----|--------------|--------------|--------------|---|----|-----|--------------|--------------|
| 9/10 | 14 | 16 | 3 | 3 | 4 | 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 |
| | | | | | | | | | | | | 22 | 95 | SLE-14017095 | SLE-15017095 |
| | | | | | | | | | | | | | 30 | SLE-14022030 | SLE-15022030 |
| | | | | | | | | | | | | | 50 | SLE-14022050 | SLE-15022050 |
| | | | | | | | | | | | | 27 | 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 | | | | | | | | | | | | | |
| 36 | 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 | | | | | | | | | | | | |
| | 125 | SLE-14036125 | SLE-15036125 | | | | | | | | | | | | |

| d | d ₁ | d ₂ | s | f | l ₁ | l | L | NR KAT. | NR KAT. | |
|-------|----------------|----------------|--------------|---|----------------|----|--------------|--------------|--------------|--------------|
| 14/15 | 20 | 25 | 6 | 9 | 7 | 36 | 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 | |
| | | | | | | 56 | 125 | SLE-14046125 | SLE-15046125 | |
| | | | | | | | 145 | SLE-14046145 | SLE-15046145 | |
| | | | | | | | 35 | SLE-14056035 | SLE-15056035 | |
| | | | | | | | 55 | SLE-14056055 | SLE-15056055 | |
| | | | | | | | 75 | SLE-14056075 | SLE-15056075 | |
| | | | | | | 66 | 95 | SLE-14056095 | SLE-15056095 | |
| | | | | | | | 135 | SLE-14056135 | SLE-15056135 | |
| | | | | | | | 55 | SLE-14066055 | SLE-15066055 | |
| | | | | | | | 65 | SLE-14066065 | SLE-15066065 | |
| | | | | | | 76 | 95 | SLE-14066095 | SLE-15066095 | |
| | | | | | | | 125 | SLE-14066125 | SLE-15066125 | |
| | | | | | | | 155 | SLE-14066155 | SLE-15066155 | |
| | | | | | | 86 | 55 | SLE-14076055 | SLE-15076055 | |
| | | | | | | | 95 | SLE-14076095 | SLE-15076095 | |
| | | | | | | | 125 | SLE-14076125 | SLE-15076125 | |
| | | | | | | 96 | 55 | SLE-14086055 | SLE-15086055 | |
| | | | | | | | 95 | SLE-14086095 | SLE-15086095 | |
| | | | | | | | 125 | SLE-14086125 | SLE-15086125 | |
| 116 | 75 | SLE-14096075 | SLE-15096075 | | | | | | | |
| | 95 | SLE-14096095 | SLE-15096095 | | | | | | | |
| | 125 | SLE-14096125 | SLE-15096125 | | | | | | | |
| 18/20 | 26 | 31 | 6 | 9 | 7 | 17 | 35 | SLE-18017035 | SLE-20017035 | |
| | | | | | | | 55 | SLE-18017055 | SLE-20017055 | |
| | | | | | | | 75 | SLE-18017075 | SLE-20017075 | |
| | | | | | | 22 | 120 | SLE-18017120 | SLE-20017120 | |
| | | | | | | | 35 | SLE-18022035 | SLE-20022035 | |
| | | | | | | | 45 | SLE-18022045 | SLE-20022045 | |
| | | | | | | 27 | 65 | SLE-18022065 | SLE-20022065 | |
| | | | | | | | 85 | SLE-18022085 | SLE-20022085 | |
| | | | | | | | 115 | SLE-18022115 | SLE-20022115 | |
| | | | | | | | 35 | SLE-18027035 | SLE-20027035 | |
| | | | | | | | 45 | SLE-18027045 | SLE-20027045 | |
| | | | | | | 36 | 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 | |
| | | | | | | | 35 | SLE-18036035 | SLE-20036035 | |
| | | | | | | | 55 | SLE-18036055 | SLE-20036055 | |
| | | | | | | 75 | SLE-18036075 | SLE-20036075 | | |
| | | | | | | 36 | 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 | | | | | | | | |

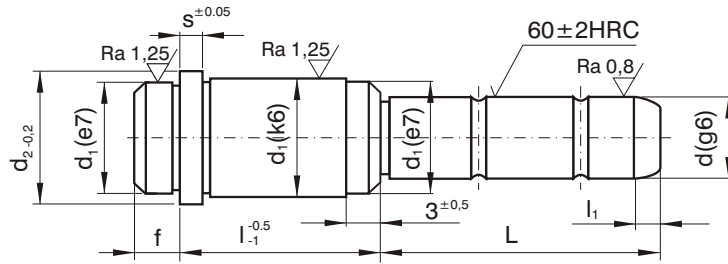


SLE

Mat: 1.7131
Nawęglany
Carbonized

| d | d ₁ | d ₂ | s | f | l ₁ | l | L | NR KAT. | NR KAT. | |
|-------|----------------|----------------|---|---|----------------|-----|-----|--------------|--------------|--------------|
| 18/20 | 26 | 31 | 6 | 9 | 7 | 36 | 255 | SLE-18036255 | SLE-20036255 | |
| | | | | | | | 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 | |
| | | | | | | 56 | 35 | SLE-18056035 | SLE-20056035 | |
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| | | | | | | | 130 | SLE-22022130 | SLE-24022130 | |
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| | | | | | | | 85 | SLE-22027085 | SLE-24027085 | |
| | | | | | | | 105 | SLE-22027105 | SLE-24027105 | |
| | | | | | | | 125 | SLE-22027125 | SLE-24027125 | |
| | | | | | | | 165 | SLE-22027165 | SLE-24027165 | |
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| 245 | SLE-22027245 | SLE-24027245 | | | | | | | | |
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| d | d ₁ | d ₂ | s | f | l ₁ | l | L | NR KAT. | NR KAT. |
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| 22/24 | 30 | 35 | 6 | 9 | 7 | 36 | 35 | SLE-22036035 | SLE-24036035 |
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| | | | | | | 46 | 245 | SLE-22036245 | SLE-24036245 |
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| | | | | | | | 65 | SLE-22046065 | SLE-24046065 |
| | | | | | | | 85 | SLE-22046085 | SLE-24046085 |
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| | | | | | | | 125 | SLE-22046125 | SLE-24046125 |
| | | | | | | 56 | 165 | SLE-22046165 | SLE-24046165 |
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| | | | | | | | 35 | SLE-22056035 | SLE-24056035 |
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| | | | | | | | 75 | SLE-22056075 | SLE-24056075 |
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| | | | | | | | 165 | SLE-22056165 | SLE-24056165 |
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| | 135 | SLE-22086135 | SLE-24086135 | | | | | | |
| | 96 | 55 | SLE-22096055 | SLE-24096055 | | | | | |
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| 116 | | 75 | SLE-22116075 | SLE-24116075 | | | | | |
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| | 155 | SLE-22116155 | SLE-24116155 | | | | | | |
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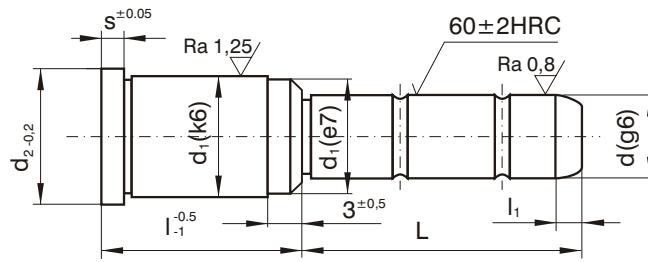


SLE

Mat: 1.7131
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| d | d ₁ | d ₂ | s | f | l ₁ | l | L | NR KAT. | NR KAT. | |
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| 30/32 | 42 | 47 | 6 | 9 | 7 | 27 | 45 | SLE-30027045 | SLE 32027045 | |
| | | | | | | | 65 | SLE-30027065 | SLE 32027065 | |
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| | | | | | | | 245 | SLE-30027245 | SLE-32027245 | |
| | | | | | | | 285 | SLE-30027285 | SLE-32027285 | |
| | | | | | | | 36 | 55 | SLE-30036055 | SLE 32036055 |
| | | | | | | | | 75 | SLE 30036075 | SLE 32036075 |
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| | | | | | | | 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 | |
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| | | | | | | 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 | |
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| | | | | | | | | | | |
| | | | | | | | | | | |

| d | d ₁ | d ₂ | s | f | l ₁ | l | L | NR KAT. | NR KAT. | | | | | | | |
|-------|----------------|----------------|--------------|--------------|----------------|-------|-----|--------------|--------------|--------------|--------------|-----|-----|--------------|--------------|--------------|
| 30/32 | 42 | 47 | 6 | 9 | 7 | 96 | 55 | SLE-30096055 | SLE-32096055 | | | | | | | |
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| | | | | | | | 155 | SLE-30096155 | SLE-32096155 | | | | | | | |
| | | | | | | | 205 | SLE-30096205 | SLE-32096205 | | | | | | | |
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| | | | | | | 156 | 115 | SLE-30156115 | SLE-32156115 | | | | | | | |
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| 116 | 95 | SLE-40116095 | SLE-42116095 | | | | | | | | | | | | | |
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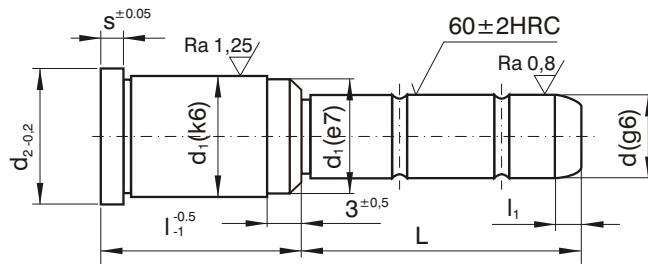


SXE

Mat: 1.7131
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|------|----------------|----------------|--------------|----------------|-------|--------------|--------------|--------------|--------------|----|--------------|--------------|--------------|
| 9/10 | 14 | 16 | 3 | 4 | 17 | 20 | SXE-09017020 | SXE-10017020 | | | | | |
| | | | | | | 30 | SXE-09017030 | SXE-10017030 | | | | | |
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| | | | | | | 35 | SXE-09022035 | SXE-10022035 | | | | | |
| | | | | | | 55 | SXE-09022055 | SXE-10022055 | | | | | |
| | | | | | | 27 | 30 | SXE-09027030 | SXE-10027030 | | | | |
| | | | | | 36 | 50 | SXE-09027050 | SXE-10027050 | | | | | |
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| | | | | | | 46 | 30 | SXE-09046030 | SXE-10046030 | | | | |
| | | | | | 14/15 | 20 | 25 | 6 | 7 | 22 | 20 | SXE-14022020 | SXE-15022020 |
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| | 85 | SXE-14046085 | SXE-15046085 | | | | | | | | | | |
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| 95 | | SXE-14056095 | SXE-15056095 | | | | | | | | | | |
| 66 | | 55 | SXE-14066055 | SXE-15066055 | | | | | | | | | |
| | | 65 | SXE-14066065 | SXE-15066065 | | | | | | | | | |

| d | d ₁ | d ₂ | s | l ₁ | l | L | NR KAT. | NR KAT. |
|-------|----------------|----------------|--------------|----------------|-----|--------------|--------------|--------------|
| 14/15 | 20 | 25 | 6 | 7 | 66 | 95 | SXE-14066095 | SXE-15066095 |
| | | | | | | 76 | 55 | SXE-14076055 |
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| | | | | | | 55 | SXE-14086055 | SXE-15086055 |
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| 18/20 | 26 | 31 | 6 | 7 | 22 | 20 | SXE-18022020 | SXE-20022020 |
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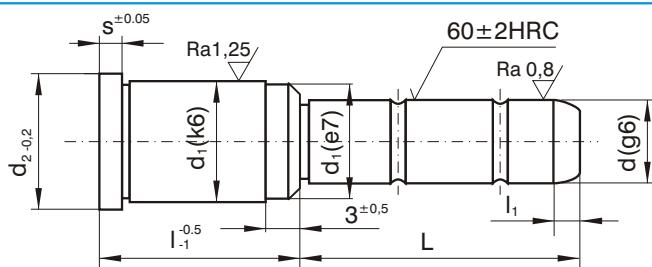


SXE

Mat: 1.7131
Nawęglany
Carbonized

| d | d ₁ | d ₂ | s | l ₁ | l | L | NR KAT. | NR KAT. | | | | | |
|-------|----------------|----------------|--------------|----------------|-------|--------------|--------------|--------------|--------------|----|----|--------------|--------------|
| 18/20 | 26 | 31 | 6 | 7 | 46 | 165 | SXE-18046165 | SXE-20046165 | | | | | |
| | | | | | | 56 | 20 | SXE-18056020 | SXE-20056020 | | | | |
| | | | | | | 35 | SXE-18056035 | SXE-20056035 | | | | | |
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| | | | | | | 75 | SXE-18056075 | SXE-20056075 | | | | | |
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| | | | | | | 75 | SXE-18066075 | SXE-20066075 | | | | | |
| | | | | | | 95 | SXE-18066095 | SXE-20066095 | | | | | |
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| | | | | | | 95 | SXE-18096095 | SXE-20096095 | | | | | |
| | | | | | 116 | 115 | SXE-18116115 | SXE-20116115 | | | | | |
| | | | | | 22/24 | 30 | 35 | 6 | 7 | 27 | 25 | SXE-22027025 | SXE-24027025 |
| | | | | | | | | | | | 45 | SXE-22027045 | SXE-24027045 |
| 50 | SXE-22027050 | SXE-24027050 | | | | | | | | | | | |
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| 80 | SXE-22027080 | SXE-24027080 | | | | | | | | | | | |
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| 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 | | | | | | | | | | |
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| | 70 | SXE-22036070 | SXE-24036070 | | | | | | | | | | |
| | 75 | SXE-22036075 | SXE-24036075 | | | | | | | | | | |
| 46 | 80 | SXE-22036080 | SXE-24036080 | | | | | | | | | | |
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| | 115 | SXE-22036115 | SXE-24036115 | | | | | | | | | | |
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| | 50 | SXE-22046050 | SXE-24046050 | | | | | | | | | | |
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| 80 | SXE-22046080 | SXE-24046080 | | | | | | | | | | | |
| 85 | SXE-22046085 | SXE-24046085 | | | | | | | | | | | |
| 105 | SXE-22046105 | SXE-24046105 | | | | | | | | | | | |

| d | d ₁ | d ₂ | s | l ₁ | l | L | NR KAT. | NR KAT. | |
|-------|----------------|----------------|--------------|----------------|-----|-----|--------------|--------------|--------------|
| 22/24 | 30 | 35 | 6 | 7 | 46 | 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 | |
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| | | | | | | 165 | SXE-22056165 | SXE-24056165 | |
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| | | | | | | | 95 | SXE-22066095 | SXE-24066095 |
| | | | | | | 76 | 25 | SXE-22076025 | SXE-24076025 |
| | | | | | 45 | | SXE-22076045 | SXE-24076045 | |
| | | | | | 55 | | SXE-22076055 | SXE-24076055 | |
| | | | | | 95 | 55 | SXE-22076075 | SXE-24076075 | |
| | | | | | | 75 | SXE-22076095 | SXE-24076095 | |
| | | | | | 86 | 115 | SXE-22076115 | SXE-24076115 | |
| | | | | | | 165 | SXE-22076165 | SXE-24076165 | |
| | | | | | | 55 | SXE-22086055 | SXE-24086055 | |
| 96 | 75 | SXE-22086075 | SXE-24086075 | | | | | | |
| | 95 | SXE-22086095 | SXE-24086095 | | | | | | |
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| 116 | 75 | SXE-22096075 | SXE-24096075 | | | | | | |
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| | 155 | SXE-22116155 | SXE-24116155 | | | | | | |
| | 135 | SXE-22136135 | SXE-24136135 | | | | | | |
| 30/32 | 42 | 47 | 6 | 7 | 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 |
| | | | | | | 46 | 115 | SXE-30036115 | SXE-32036115 |
| | | | | | | | 155 | SXE-30036155 | SXE-32036155 |
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| | | | | | 95 | | SXE-30056095 | SXE-32056095 | |
| | | | | | 66 | 115 | SXE-30056115 | SXE-32056115 | |
| | | | | | | 135 | SXE-30056135 | SXE-32056135 | |
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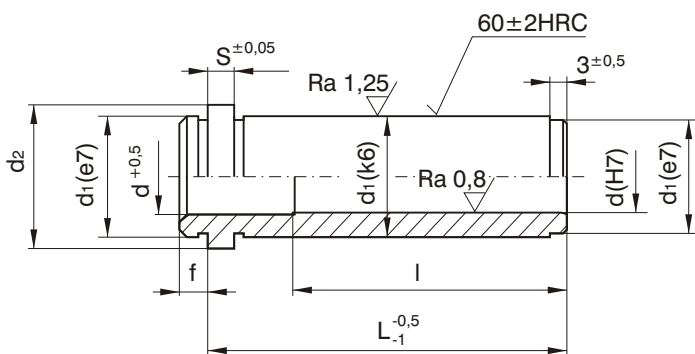


SXE

Mat: 1.7131
Nawęglany
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| d | d ₁ | d ₂ | s | I ₁ | I | L | NR KAT. | NR KAT. | d | d ₁ | d ₂ | s | I ₁ | I | L | NR KAT. | NR KAT. | |
|-------|----------------|----------------|--------------|----------------|-------|-----|--------------|--------------|-------|----------------|----------------|----|----------------|-----|--------------|--------------|--------------|--------------|
| 30/32 | 42 | 47 | 6 | 7 | 66 | 75 | SXE-30066075 | SXE-32066075 | 40/42 | 54 | 60 | 10 | 7 | 156 | 115 | SXE-40156115 | SXE-42156115 | |
| | | | | | | 95 | SXE-30066095 | SXE-32066095 | | | | | | | 155 | SXE-40156155 | SXE-42156155 | |
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| | | | | | | 235 | SXE-40196235 | SXE-42196235 | | | | | | | | | | |
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| | | | | | | 75 | SXE-30076075 | SXE-32076075 | | | | | | | | | | |
| | | | | | | 95 | SXE-30076095 | SXE-32076095 | | | | | | | | | | |
| | | | | | | 115 | SXE-30076115 | SXE-32076115 | | | | | | | | | | |
| | | | | | | 155 | SXE-30076155 | SXE-32076155 | | | | | | | | | | |
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| | | | | | 95 | | SXE-30086095 | SXE-32086095 | | | | | | | | | | |
| | | | | | 115 | | SXE-30086115 | SXE-32086115 | | | | | | | | | | |
| | | | | | 96 | 55 | SXE-30096055 | SXE-32096055 | | | | | | | | | | |
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| | | | | | | 95 | SXE-30096095 | SXE-32096095 | | | | | | | | | | |
| | | | | | | 115 | SXE-30096115 | SXE-32096115 | | | | | | | | | | |
| | | | | | 116 | 75 | SXE-30116075 | SXE-32116075 | | | | | | | | | | |
| | | | | | | 115 | SXE-30116115 | SXE-32116115 | | | | | | | | | | |
| | | | | | | 155 | SXE-30116155 | SXE-32116155 | | | | | | | | | | |
| | | | | | 136 | 95 | SXE-30136095 | SXE-32136095 | | | | | | | | | | |
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| | | | | | | 155 | SXE-30136155 | SXE-32136155 | | | | | | | | | | |
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| | | | | | | 155 | SXE-30156155 | SXE-32156155 | | | | | | | | | | |
| | | | | | 196 | 155 | SXE-30196155 | SXE-32196155 | | | | | | | | | | |
| | | | | | | 195 | SXE-30196195 | SXE-32196195 | | | | | | | | | | |
| | | | | | 40/42 | 54 | 60 | 10 | | | | | | 7 | 56 | 75 | SXE-40056075 | SXE-42056075 |
| 115 | SXE-40056115 | SXE-42056115 | | | | | | | | | | | | | | | | |
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| 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 | | | | | | | | | | | | | | | |
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TPE



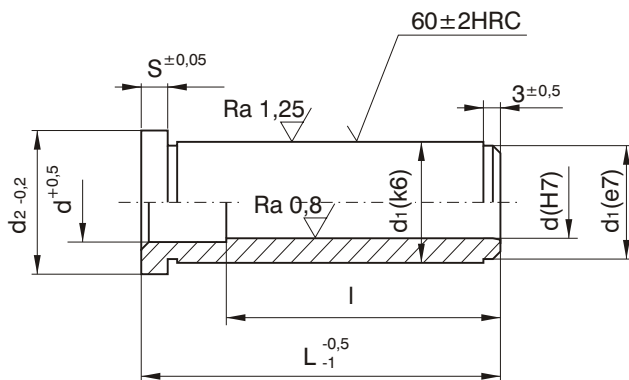
Mat: 1.7131

Nawęglana
Carbonized

| d | d ₁ | d ₂ | s | f | l | L | NR KAT. | NR KAT. |
|-------|----------------|----------------|-----------|---|----|----|-----------|-----------|
| 9/10 | 14 | 16 | 3 | 3 | 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 | 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 |

| d | d ₁ | d ₂ | s | f | l | L | NR KAT. | NR KAT. |
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| 22/24 | 30 | 35 | 6 | 9 | 36 | 27 | TPE-22027 | TPE-24027 |
| | | | | | 45 | 36 | TPE-22036 | TPE-24036 |
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| | | | | | 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 | 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 |
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| | | | | | 116 | 136 | TPE-30136 | TPE-32136 |
| 116 | 156 | TPE-30156 | TPE-32156 | | | | | |
| 116 | 196 | TPE-30196 | TPE-32196 | | | | | |
| 40/42 | 54 | 60 | 10 | 12 | 58 | 46 | TPE-40046 | TPE-42046 |
| | | | | | 68 | 56 | TPE-40056 | TPE-42056 |
| | | | | | 78 | 66 | TPE-40066 | TPE-42066 |
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| | | | | | 98 | 86 | TPE-40086 | TPE-42086 |
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TXE



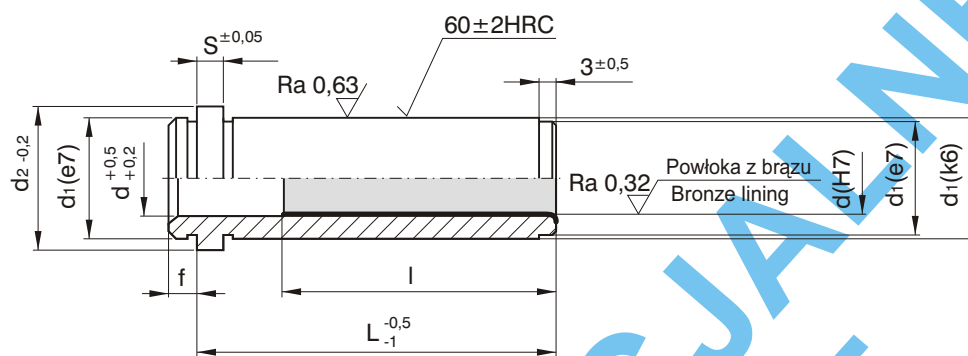
Mat: 1.7131

Nawęglana
Carbonized

| d | d ₁ | d ₂ | s | l | 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 |
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| | | | | 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 |
| 56 | 96 | TXE-14096 | TXE-15096 | | | | |
| 18/20 | 26 | 31 | 6 | 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 |
| | | | | 76 | 96 | TXE-18096 | TXE-20096 |
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| 22/24 | 30 | 35 | 6 | 17 | 17 | TXE-22017 | TXE-24017 |

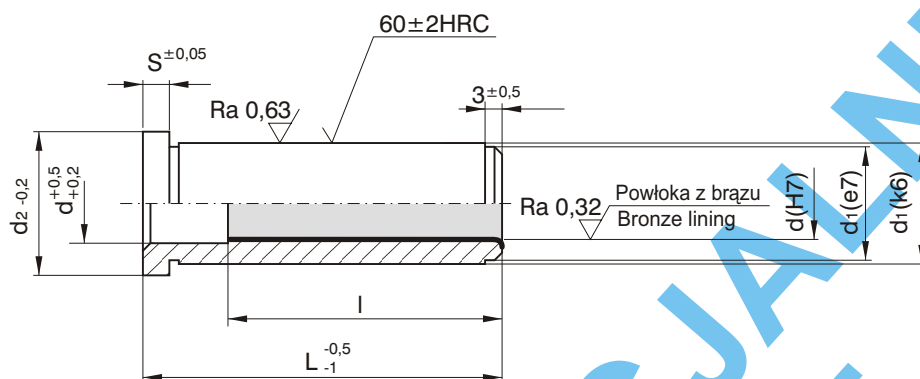
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| 22/24 | 30 | 35 | 6 | 22 | 22 | TXE-22022 | TXE-24022 |
| | | | | 27 | 27 | TXE-22027 | TXE-24027 |
| | | | | 36 | 36 | TXE-22036 | TXE-24036 |
| | | | | 46 | 46 | TXE-22046 | TXE-24046 |
| | | | | 56 | 56 | TXE-22056 | TXE-24056 |
| | | | | 66 | 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 |
| 30/32 | 42 | 47 | 6 | 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 |
| | | | | 116 | 136 | TXE-30136 | TXE-32136 |
| 40/42 | 54 | 60 | 10 | 116 | 156 | TXE-30156 | TXE-32156 |
| | | | | 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 |
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TPB



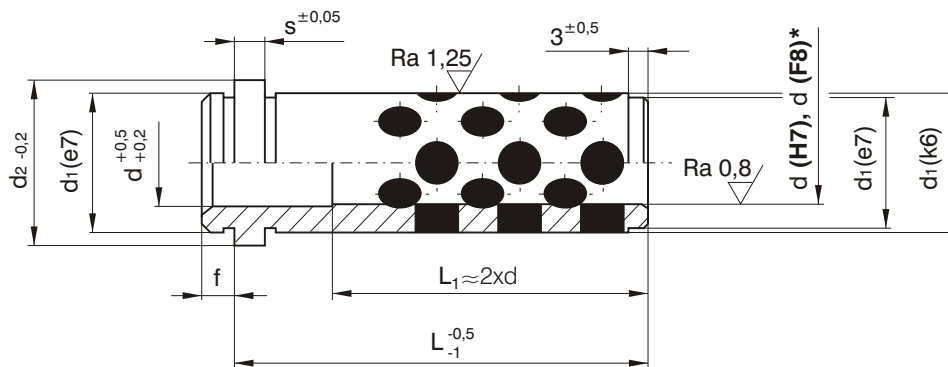
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|-------|----------------|----------------|-----------|----|----|-----------|-----------|-----------|-------|----------------|----------------|-----------|----|-------|-----|-----------|-----------|---|----|----|-----------|-----------|
| 14/15 | 20 | 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 |
| 56 | 116 | TPB-14116 | TPB-15116 | 65 | 56 | TPB-30056 | TPB-32056 | | | | | | | | | | | | | | | |
| 18/20 | 26 | 31 | 6 | 9 | 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 | | | | | |
| | | | | | 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 | | | | | | | | | | | | | | | |
| 22/24 | 30 | 35 | 6 | 9 | 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 | d1 | d2 | s | l | L | NR KAT. | NR KAT. | d | d1 | d2 | 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 | | | | | 30/32 | 42 | 47 | 6 | 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 | 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 | 40/42 | 54 | 60 | 10 | 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 | | | | |
| 76 | 116 | TXB-18116 | TXB-20116 | 66 | 76 | TXB-40076 | TXB-42076 | | | | | | | | | | | | |
| 22/24 | 30 | 35 | 6 | 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



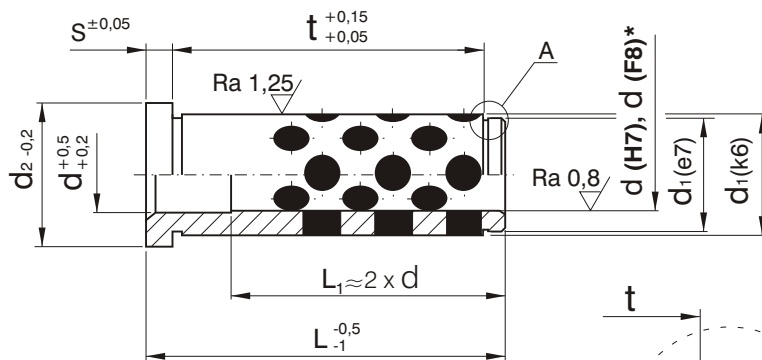
Mat: Brąz alumiiniowy
Aluminium bronze

| d | d ₁ | d ₂ | 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 | 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 |
| | | | | | 56 | TPG-18056 | TPG-20056 |
| | | | | | 66 | TPG-18066 | TPG-20066 |
| 22/24 | 30 | 35 | 6 | 8 | 22 | TPG-22022 | TPG-24022 |
| | | | | | 27 | TPG-22027 | TPG-24027 |
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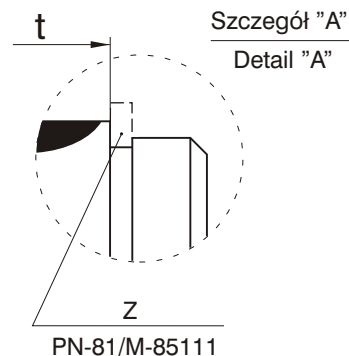
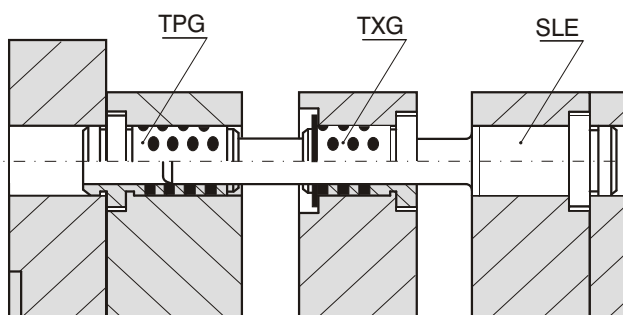
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| | | | | | 66 | TPG-22066 | TPG-24066 |
| | | | | | 76 | TPG-22076 | TPG-24076 |
| | | | | | 86 | TPG-22086 | TPG-24086 |
| | | | | | 96 | TPG-22096 | TPG-24096 |
| | | | | | 116 | TPG-22116 | TPG-24116 |
| | | | | | 30/32 | 42 | 47 |
| 36 | TPG-30036 | TPG-32036 | | | | | |
| 46 | TPG-30046 | TPG-32046 | | | | | |
| 56 | TPG-30056 | TPG-32056 | | | | | |
| 66 | TPG-30066 | TPG-32066 | | | | | |
| 76 | TPG-30076 | TPG-32076 | | | | | |
| 86 | TPG-30086 | TPG-32086 | | | | | |
| 96 | TPG-30096 | TPG-32096 | | | | | |
| 116 | TPG-30116 | TPG-32116 | | | | | |
| 136 | TPG-30136 | TPG-32136 | | | | | |
| 40/42 | 54 | 60 | 10 | 10 | 46 | TPG-40046 | TPG-42046 |
| | | | | | 56 | TPG-40056 | TPG-42056 |
| | | | | | 66 | TPG-40066 | TPG-42066 |
| | | | | | 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
Aluminium Bronze

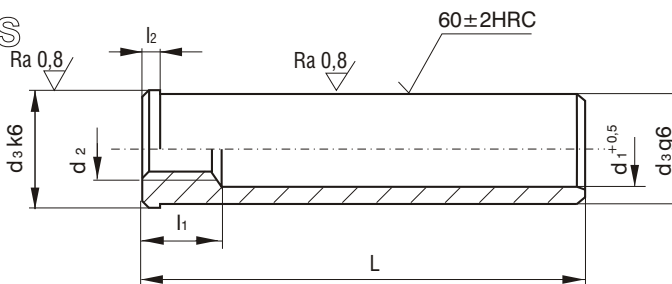
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|-------|----------------|----------------|---|--------------|------|----|-----------|-----------|
| 9/10 | 14 | 16 | 3 | Z14 / 14x1 | 5,5 | 12 | TXG-09012 | TXG-10012 |
| | | | | | 10,5 | 17 | TXG-09017 | TXG-10017 |
| | | | | | 15,5 | 22 | TXG-09022 | 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 | 7 | 17 | TXG-12017 | ----- |
| | | | | | 12 | 22 | TXG-12022 | ----- |
| | | | | | 17 | 27 | TXG-12027 | ----- |
| | | | | | 26 | 36 | TXG-12036 | ----- |
| | | | | | 36 | 46 | TXG-12046 | ----- |
| | | | | | 46 | 56 | TXG-12056 | ----- |
| 14/15 | 20 | 25 | 6 | Z20 / 20x1,2 | 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 |
| | | | | | 46 | 56 | TXG-14056 | TXG-15056 |
| 16 | 22 | 27 | 6 | Z22 / 22x1,2 | 12 | 22 | TXG-16022 | ----- |
| | | | | | 17 | 27 | TXG-16027 | ----- |
| | | | | | 26 | 36 | TXG-16036 | ----- |
| | | | | | 36 | 46 | TXG-16046 | ----- |
| 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 |

| d | d ₁ | d ₂ | 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 |
| 22/24 | 30 | 35 | 6 | Z30 / 30x1,5 | 11 | 22 | TXG-22022 | TXG-24022 |
| | | | | | 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 |
| 30/32 | 42 | 47 | 6 | Z42 / 42x1,75 | 75 | 86 | TXG-22086 | TXG-24086 |
| | | | | | 85 | 96 | TXG-22096 | TXG-24096 |
| | | | | | 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 |
| 40/42 | 54 | 60 | 10 | Z55 / 55x2,0 | 63 | 76 | TXG-30076 | TXG-32076 |
| | | | | | 73 | 86 | TXG-30086 | TXG-32086 |
| | | | | | 83 | 96 | TXG-30096 | TXG-32096 |
| | | | | | 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 |

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

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

TULEJA USTALAJĄCA
LOCATING SLEEVES



TUE

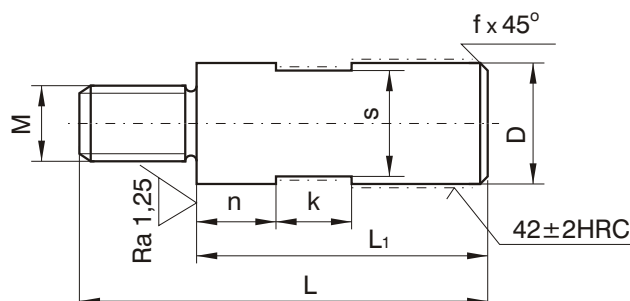
Mat: 1.7131

Nawęglana
Carbonized

| 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 | 40 | TUE -30040 |
| | | | | | 60 | TUE -30060 |

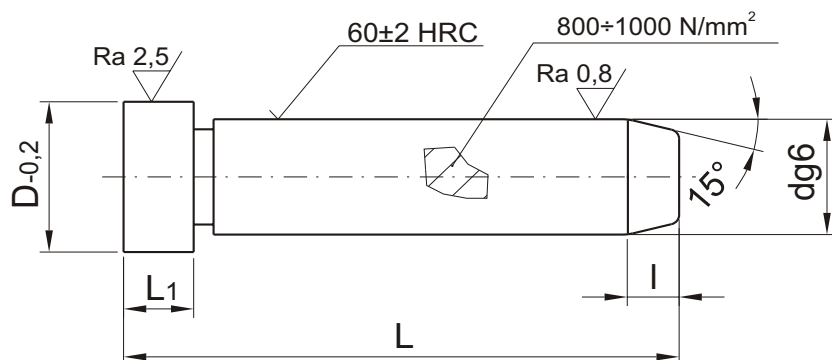
| l_1 | l_2 | d_1 | d_2 | d_3 | L | NR KAT. |
|-------|-------|-------|-------|-------|-----|-----------|
| 13 | 2,5 | 25 | M12 | 30 | 80 | TUE-30080 |
| | | | | | 100 | TUE-30100 |
| | | | | | 120 | TUE-30120 |
| | | | | | 140 | TUE-30140 |
| | | | | | 160 | TUE-30160 |
| | | | | | 180 | TUE-30180 |
| | | | | | 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 | 60 | TUE-54060 |
| | | | | | 80 | TUE-54080 |
| | | | | | 120 | TUE-54120 |
| | | | | | 160 | TUE-54160 |
| | | | | | 200 | TUE-54200 |
| | | | | | 240 | TUE-54240 |
| | | | | | 280 | TUE-54280 |

NÓŻKA
FEET



NF

| 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

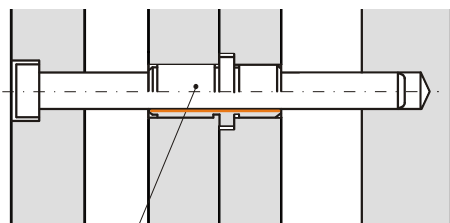
Mat: 1.7131
Nawaęglany
Carbonized

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

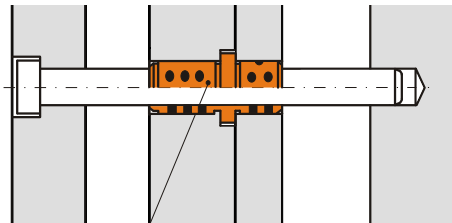
| I | D | L1 | d | L | NR KAT. |
|----|----|----|----|-----|----------|
| 7 | 24 | 8 | 20 | 140 | SS-20140 |
| | | | | 160 | SS-20160 |
| | | | | 180 | SS-20180 |
| | | | | 200 | SS-20200 |
| | | | | 240 | SS-20240 |
| | | | | 240 | SS-20240 |
| 7 | 26 | 15 | 22 | 80 | SS-22080 |
| | | | | 100 | SS-22100 |
| | | | | 120 | SS-22120 |
| | | | | 140 | SS-22140 |
| | | | | 160 | SS-22160 |
| | | | | 180 | SS-22180 |
| | | | | 200 | SS-22200 |
| 7 | 28 | 15 | 24 | 80 | SS-24080 |
| | | | | 100 | SS-24100 |
| | | | | 120 | SS-24120 |
| | | | | 140 | SS-24140 |
| | | | | 160 | SS-24160 |
| | | | | 180 | SS-24180 |
| | | | | 200 | SS-24200 |
| 7 | 36 | 15 | 30 | 100 | SS-30100 |
| | | | | 120 | SS-30120 |
| | | | | 160 | SS-30160 |
| | | | | 200 | SS-30200 |
| | | | | 240 | SS-30240 |
| | | | | 300 | SS-30300 |
| | | | | 360 | SS-30360 |
| 7 | 36 | 15 | 32 | 100 | SS-32100 |
| | | | | 120 | SS-32120 |
| | | | | 160 | SS-32160 |
| | | | | 200 | SS-32200 |
| | | | | 240 | SS-32240 |
| | | | | 300 | SS-32300 |
| | | | | 360 | SS-32360 |
| 10 | 48 | 15 | 40 | 160 | SS-40160 |
| | | | | 200 | SS-40200 |
| | | | | 240 | SS-40240 |
| | | | | 300 | SS-40300 |
| | | | | 360 | SS-40360 |
| 15 | 58 | 15 | 50 | 160 | SS-50160 |
| | | | | 200 | SS-50200 |
| | | | | 240 | SS-50240 |
| | | | | 300 | SS-50300 |
| | | | | 360 | SS-50360 |

RODZAJE PROWADZEŃ PŁYT WYPYCHACZY

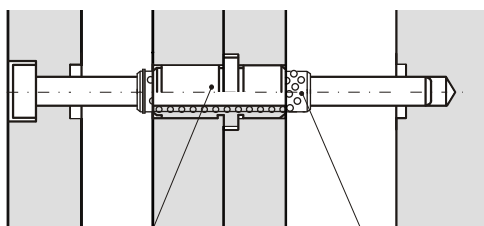
TYPES OF EJECTION SYSTEMS



TBW

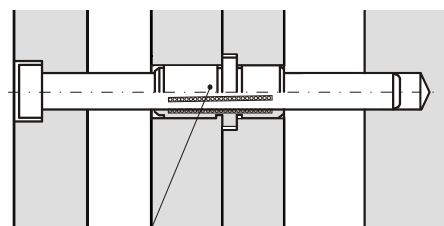


TGW



TKW

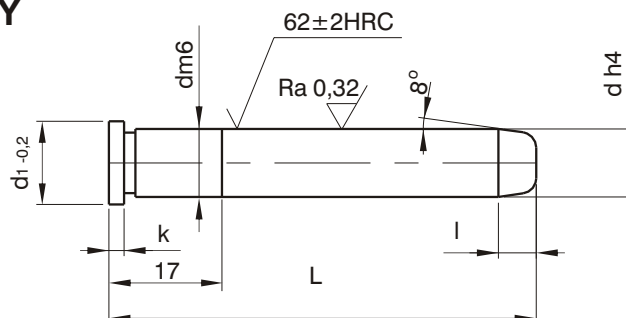
KKW



DKA

SŁUP PROWADZĄCY

LEADER PINS



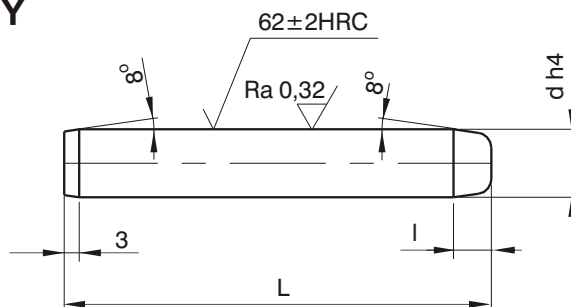
SPW

Mat: 1.7131
Nawęglany
Carbonized

| d | d1 | 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

Mat: 1.7131
Nawęglany
Carbonized

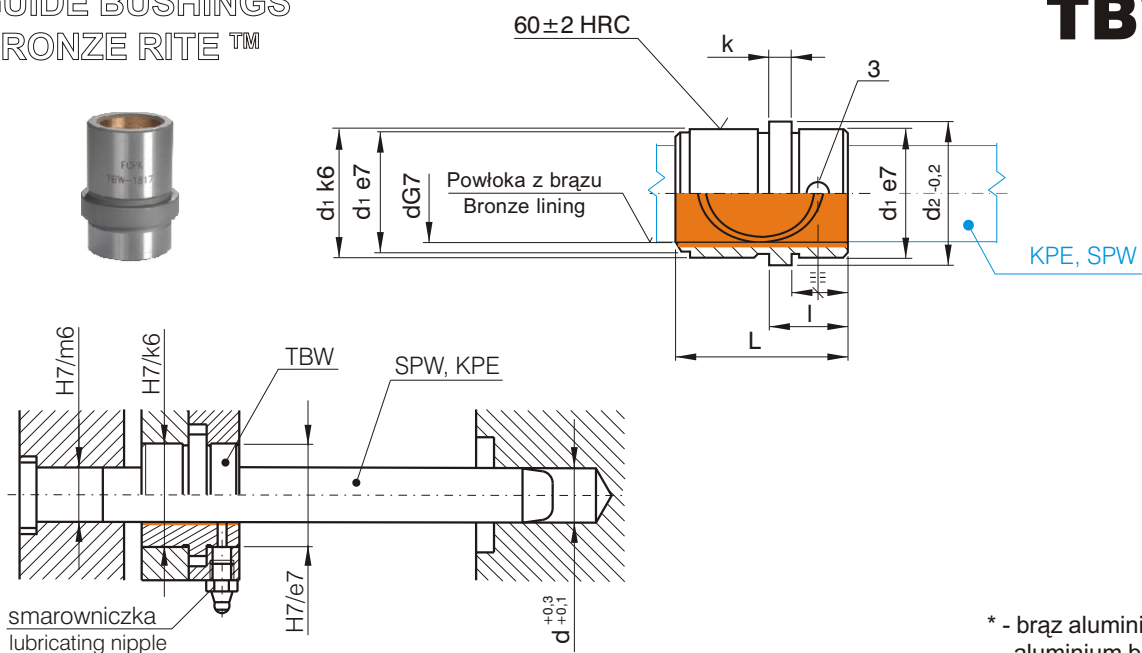
| d | l | NR KATALOGOWY | | | |
|----|---|---------------|-----------|-----------|-----------|
| | | L=100 | L=125 | L=160 | L=240 |
| 12 | 6 | KPE-12100 | KPE-12125 | | |
| 18 | 7 | | KPE-18125 | KPE-18160 | |
| 30 | 7 | | | KPE-30160 | KPE-30240 |

TULEJA PROWADZĄCA

GUIDE BUSHINGS

BRONZE RITE™

TBW



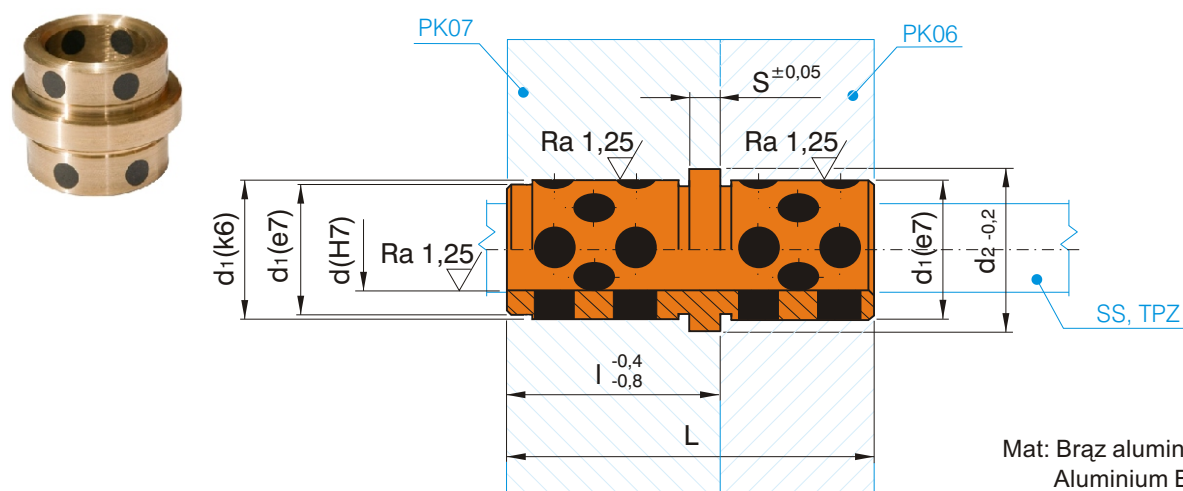
* - brąz aluminiowy
- aluminium bronze

| d | d1 | d2 | K | NR KATALOGOWY | | | | |
|----|----|----|---|---------------|--------------|--------------|--------------|--------------|
| | | | | l=9 L=21 | l=12 L=29 | l=17 L=39 | l=22 L=49 | l=27 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

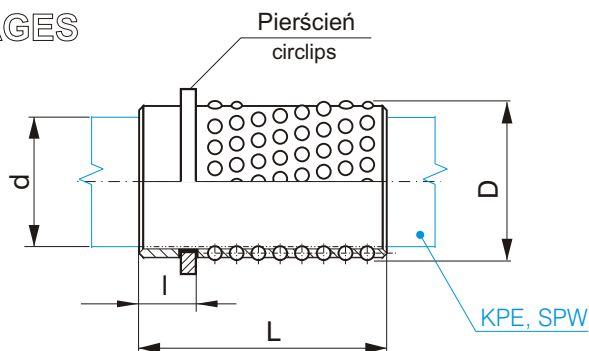


Mat: Brąz aluminiowy
Aluminium Bronze

| d | d1 | d2 | s | l | 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

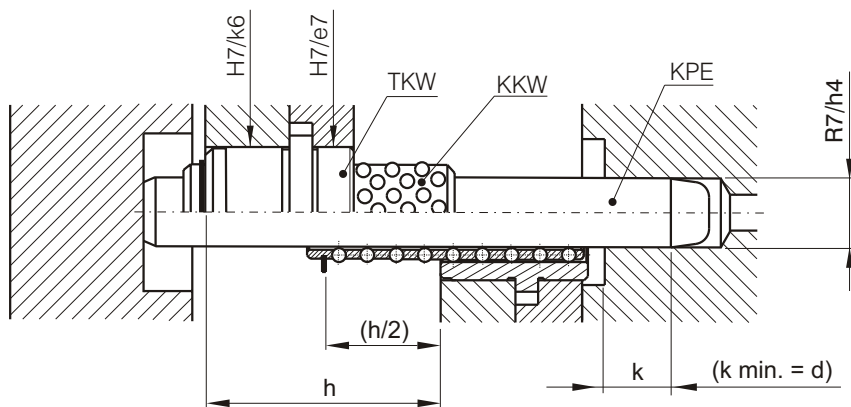
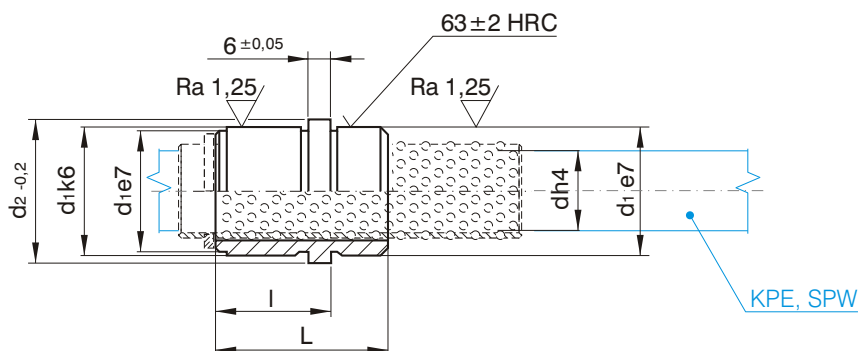


Mat: Aluminium

| 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



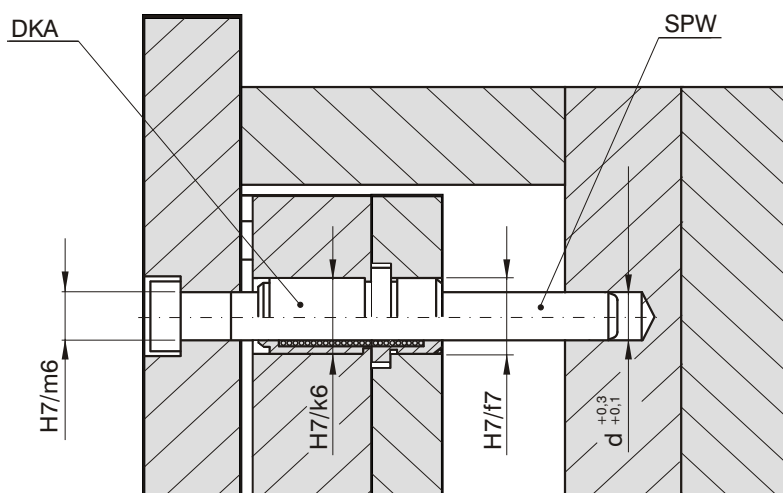
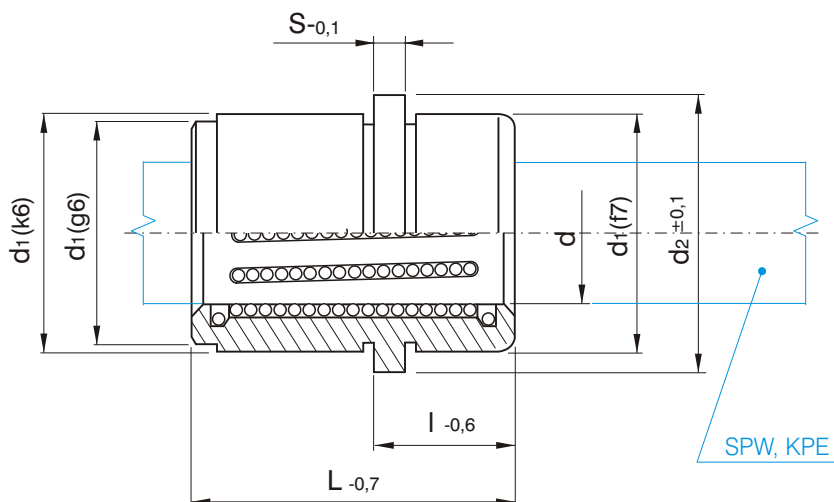
Stal narzędziowa
Tool steel

| 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 |



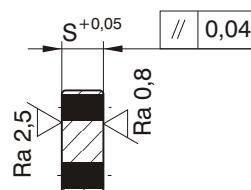
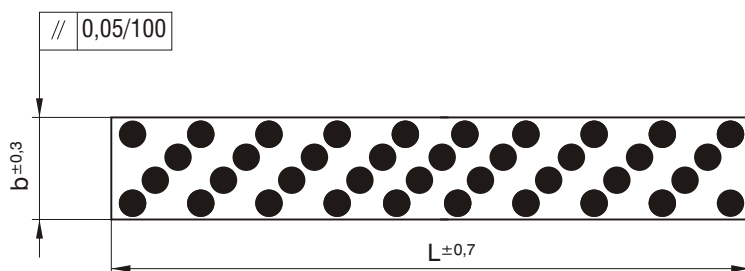
NOWOŚĆ
NEW

DKA



| d | d ₁ | d ₂ | 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 |

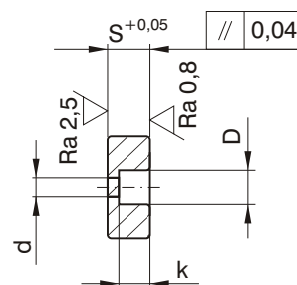
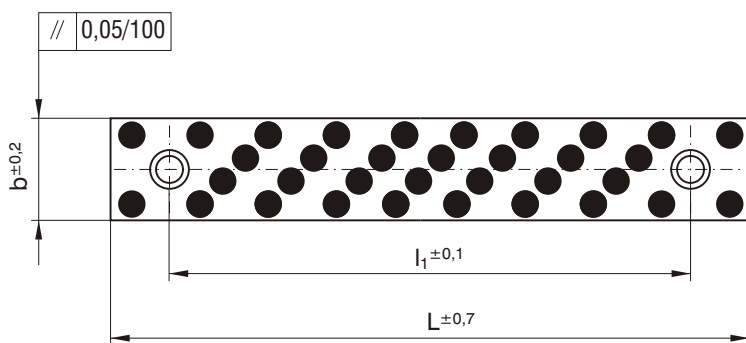
PFA



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

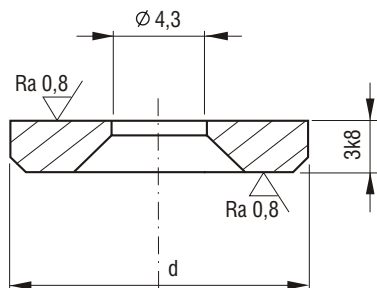
Mat: Brąz alumiowy
Aluminium bronze

PFB

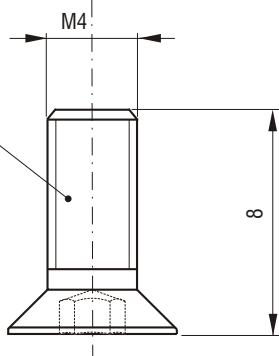


Mat: Brąz alumiowy
Aluminium bronze

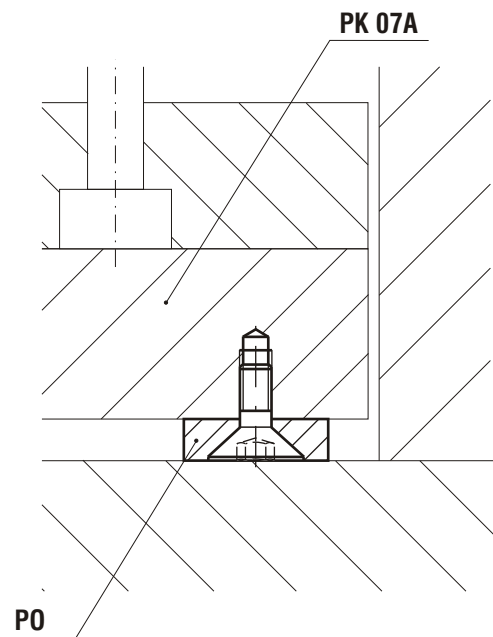
| s | b | k | d | D | L | | | |
|---------|----|-----|-----|-----|----------------|-------------|-------------|-------------|
| | | | | | 50 | 75 | 100 | 150 |
| | | | | | l ₁ | | | |
| | | | | | 30 | 45 | 50 | 100 |
| NR KAT. | | | | | | | | |
| 8 | 20 | 5.7 | 5.5 | 9.5 | PFB-2008050 | PFB-2008075 | ————— | ————— |
| 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 |



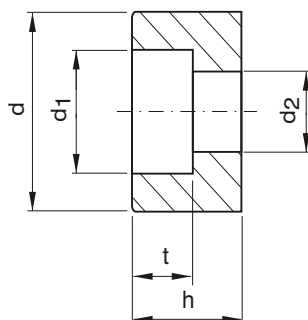
DIN 7991
8.8 (800N/mm²)



PO



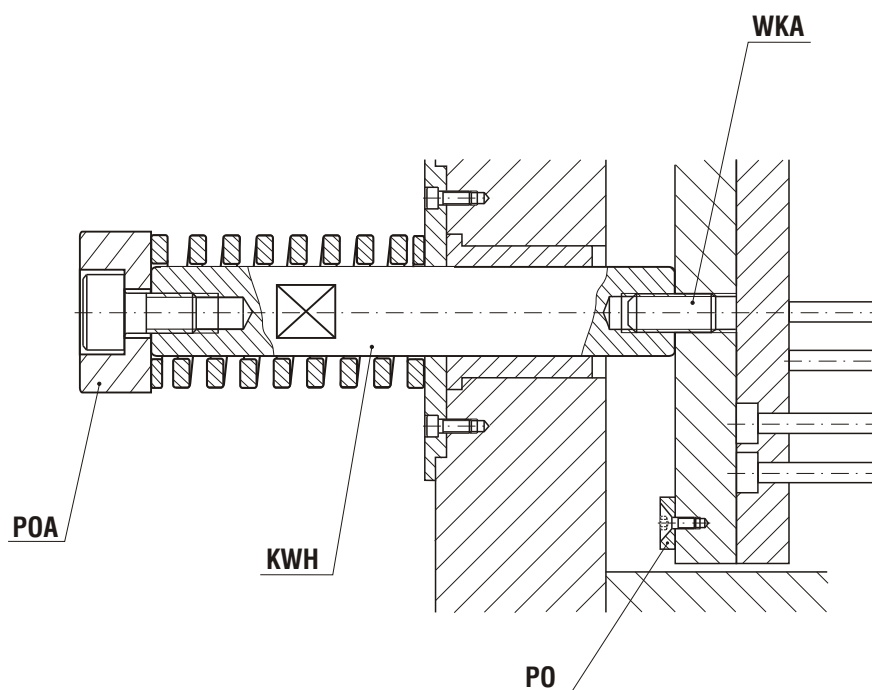
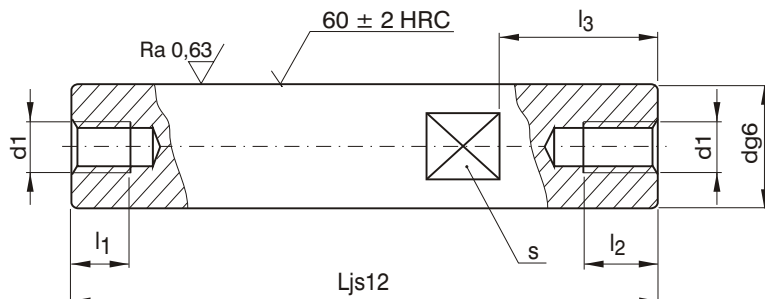
| NR KAT. | d | DIN 7991 |
|----------|----|----------|
| PO -1803 | 18 | M4x8 |
| PO -2803 | 28 | |



POA

| d | d ₁ | d ₂ | 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 |

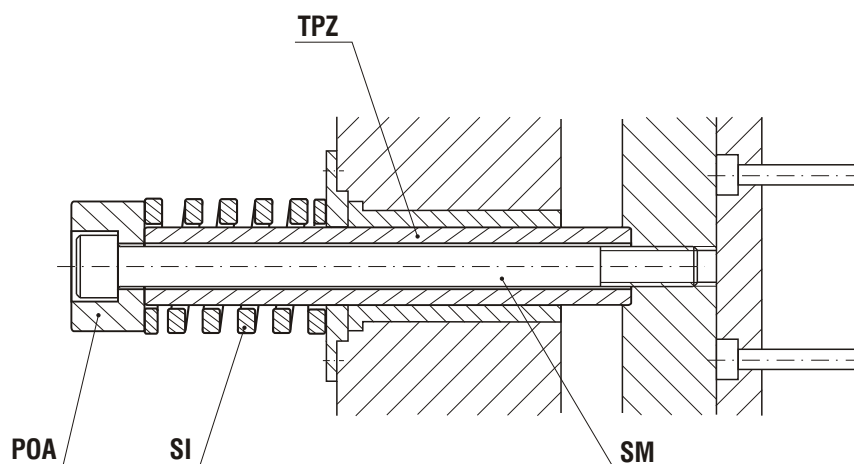
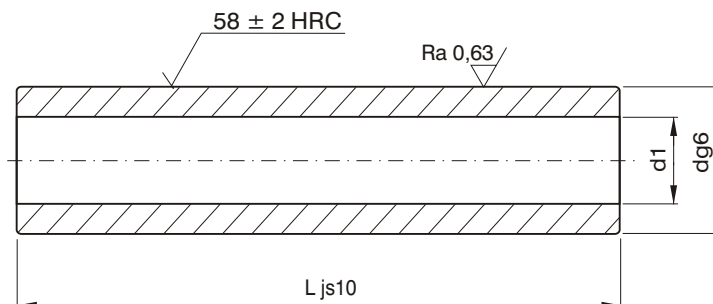
30 ± 2 HRC



| d | d ₁ | s | l ₁ | l ₂ | l ₃ | 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 | d ₁ | s | l ₁ | l ₂ | l ₃ | L | NR KAT. |
|----|----------------|----|----------------|----------------|----------------|-----|-----------|
| 18 | M10 | 14 | 12 | 20 | 45 | 220 | KWH-18220 |
| | | | | | | 240 | KWH-18240 |
| | | | | | | 20 | M12 |
| 20 | M12 | 16 | 14 | 25 | 45 | 120 | KWH-20120 |
| | | | | | | 140 | KWH-20140 |
| | | | | | | 160 | KWH-20160 |
| | | | | | | 180 | KWH-20180 |
| | | | | | | 220 | KWH-20220 |
| | | | | | | 240 | KWH-20240 |
| 24 | M12 | 19 | 14 | 25 | 50 | 120 | KWH-24120 |
| | | | | | | 140 | KWH-24140 |
| | | | | | | 160 | KWH-24160 |
| | | | | | | 180 | KWH-24180 |
| | | | | | | 200 | KWH-24200 |
| | | | | | | 240 | KWH-24240 |
| 30 | M16 | 24 | 16 | 30 | 56 | 180 | KWH-30180 |
| | | | | | | 220 | KWH-30220 |
| | | | | | | 260 | KWH-30260 |
| | | | | | | 300 | KWH-30300 |
| | | | | | | | |

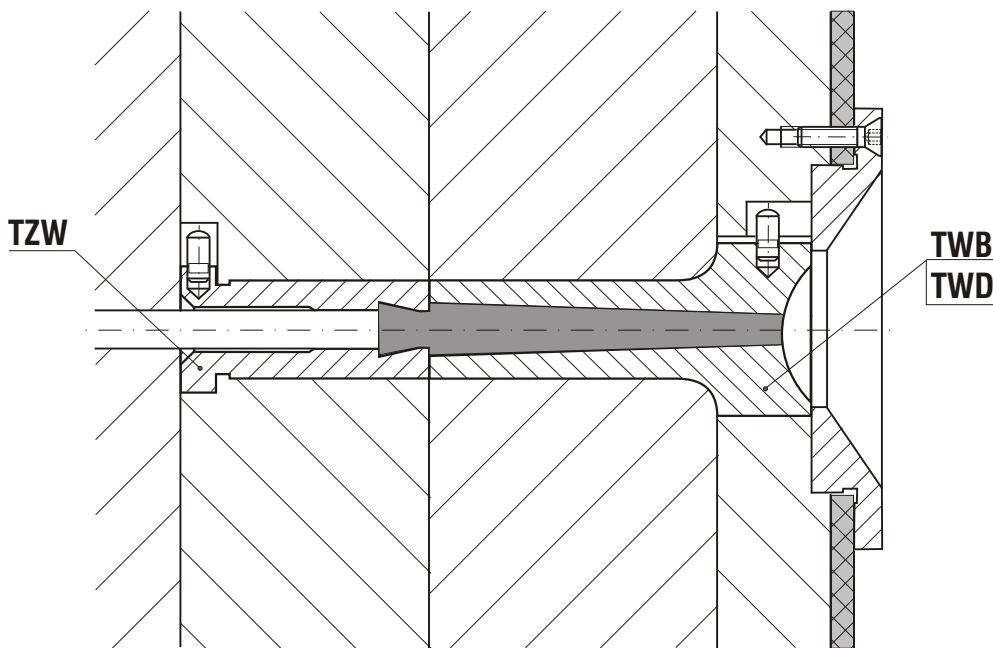
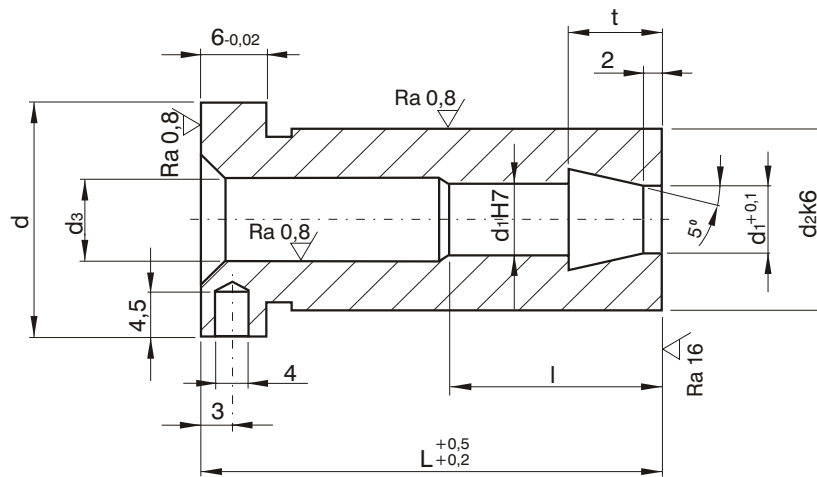
TPZ



| d | d ₁ | 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 | 40 | TPZ-18040 |
| | | 60 | TPZ-18060 |
| | | 80 | TPZ-18080 |
| | | 100 | TPZ-18100 |

| d | d ₁ | 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 |
| 80 | TPZ-24080 | | |
| 100 | TPZ-24100 | | |
| 120 | TPZ-24120 | | |
| 140 | TPZ-24140 | | |
| 160 | TPZ-24160 | | |
| 180 | TPZ-24180 | | |
| 30 | 16,5 | 200 | TPZ-24200 |
| | | 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 | | |

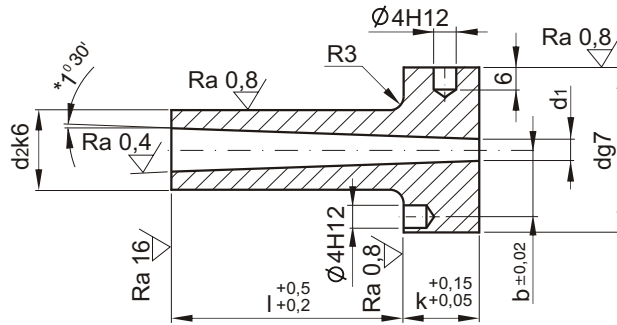
TZW



Mat: 1.2210
56±2 HRC

| d ₂ | d ₃ | d | d ₁ | 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 | TZW-1822 | |
| | | | | | 27 | TZW-1827 | |
| | | | | | 28 | TZW-1836 | |
| | | | | | 46 | TZW-1846 | |
| | | | | | 56 | TZW-1856 | |

| d ₂ | d ₃ | d | d ₁ | 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 |



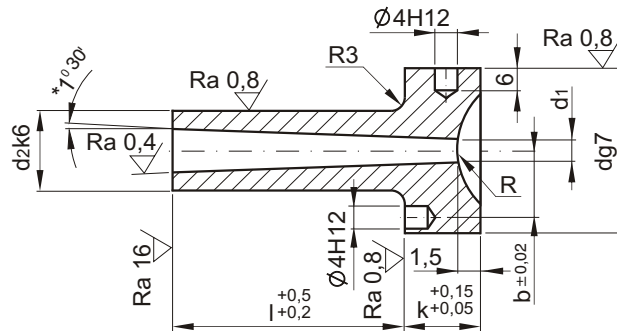
TWA

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

Mat: 1.8159
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 |
| 24 | 48 | 23 | 20 | 6,5 | 56 | TWA-246556 | | | | | |
| | | | | | 76 | TWA-246576 | | | | | |



TWB

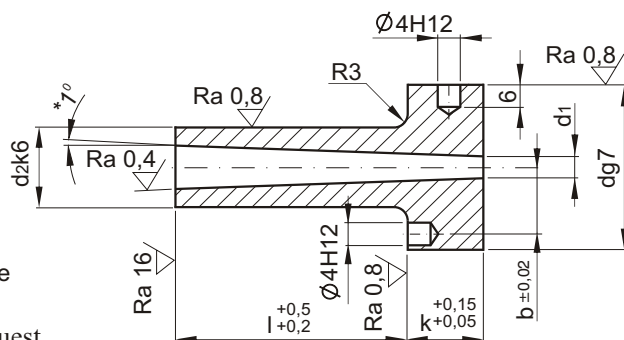
* Na życzenie oferujemy tuleje z kątem 0,5°
* Hole inclination 0,5° on request

Mat: 1.8159
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 |
| | | | | | | | | 6,5 | 56 | TWB-244556-15,5 |
| | | | | | | | | | 76 | TWB-244576-15,5 |

| 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 | | | | |
| | | | | | 56 | TWB-183556-40 | | | | |
| | | | | 4,5 | 27 | TWB-184527-40 | | | | |
| | | | | | 36 | TWB-184536-40 | | | | |
| | | | | | 46 | TWB-184546-40 | | | | |
| | | | | | 56 | TWB-184556-40 | | | | |
| | | | | 24 | 48 | 23 | 20 | 4,5 | 76 | TWB-184576-40 |
| | | | | | | | | | 46 | TWB-244546-40 |
| | | | | | | | | 6,5 | 56 | TWB-244556-40 |
| | | | | | | | | | 76 | TWB-244576-40 |

TWC



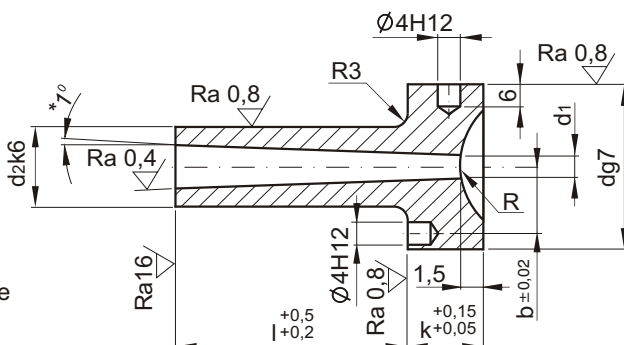
* Na życzenie oferujemy tuleje z kątem 0,5°
* Hole inclination 0,5° on request

Mat: 1.8159
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-123556 |
| | | | | 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 |
| | | | | | 116 | TWC-1830116 |
| | | | | 4 | 27 | TWC-184027 |
| | | | | | 36 | TWC-184036 |
| | | | | | 46 | TWC-184046 |
| | | | | | 56 | TWC-184056 |
| | | | | | 76 | TWC-184076 |
| 18 | 38 | 18 | 15 | 3 | 96 | TWC-184096 |
| | | | | | 116 | TWC-1840116 |
| | | | | | 116 | TWC-1840116 |

TWD



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

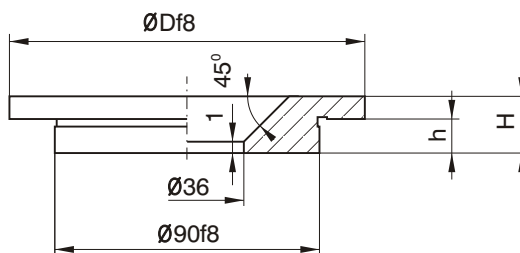
Mat: 1.8159
55 ± 2 HRC

| 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-123556-15,5 |
| | | | | 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 |
| | | | | | 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 |
| | | | | | 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-123556-40 |
| | | | | 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 |
| | | | | | 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 |
| | | | | | 116 | TWD-1840116-40 |



PCA



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

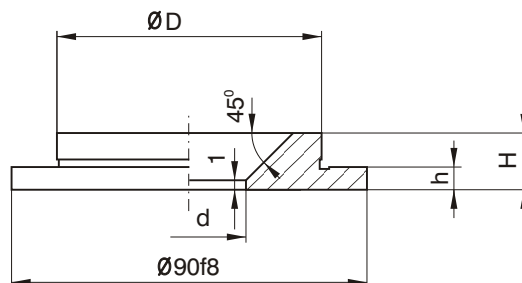
| h | D | H | NR KAT. |
|------|------|------------|------------|
| 4 | 120 | 8 | PCA-120080 |
| 7 | | 11 | PCA-120110 |
| 4 | | 12 | PCA-120120 |
| 9 | | 13 | PCA-120130 |
| 11 | | 15 | PCA-120150 |
| 12.5 | 16.5 | PCA-120165 | |
| 4 | 125 | 8 | PCA-125080 |
| 7 | | 11 | PCA-125110 |
| 4 | | 12 | PCA-125120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

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

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



PCA

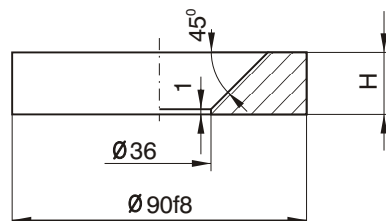


| d | h | D | H | NR KAT. |
|----|---|----|----|------------|
| 36 | 4 | 60 | 8 | PCA-060080 |
| 26 | 7 | | 11 | PCA-060110 |
| | 9 | | 13 | PCA-060130 |

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



PCA

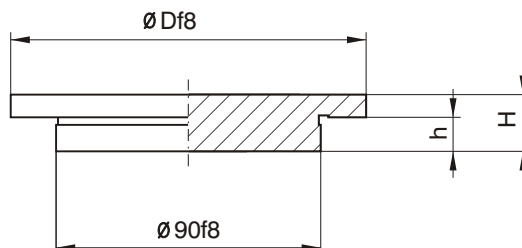


| H | NR KAT. |
|----|------------|
| 8 | PCA-090080 |
| 11 | PCA-090110 |
| 13 | PCA-090130 |

| H | NR KAT. |
|------|------------|
| 15 | PCA-090150 |
| 16.5 | 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 | | 16.5 | PCB-100165 |
| 4 | 110 | 8 | PCB-110080 |
| 7 | | 11 | PCB-110110 |
| 9 | | 12 | PCB-110120 |
| 11 | | 13 | PCB-110130 |
| 15 | | 15 | PCB-110150 |

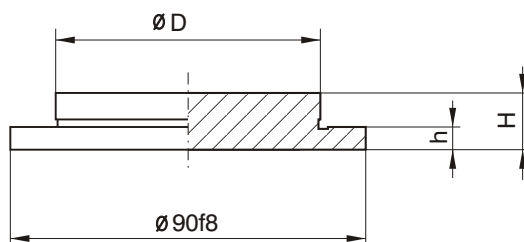
| h | D | H | NR KAT. | |
|------|-----|------|------------|------------|
| 12.5 | 110 | 16.5 | PCB-110165 | |
| 4 | | 120 | 8 | PCB-120080 |
| 7 | | | 11 | PCB-120110 |
| 9 | | | 12 | PCB-120120 |
| 11 | | | 13 | PCB-120130 |
| 15 | 15 | | PCB-120150 | |
| 12.5 | 125 | 16.5 | PCB-120165 | |
| 4 | | 125 | 8 | PCB-125080 |
| 7 | | | 11 | PCB-125110 |
| 9 | | | 12 | PCB-125120 |
| 11 | | | 15 | PCB-125150 |

| h | D | H | NR KAT. | |
|------|-----|------|------------|------------|
| 9 | 125 | 13 | PCB-125130 | |
| 11 | | 15 | PCB-125150 | |
| 12.5 | | 16.5 | PCB-125165 | |
| 4 | 140 | 8 | PCB-140080 | |
| 7 | | 150 | 11 | PCB-150080 |
| 9 | | | 12 | PCB-150120 |
| 11 | | | 13 | PCB-150130 |
| 15 | | | 15 | PCB-150150 |

| h | D | H | NR KAT. | | | |
|------|-----|------|------------|------------|------------|------------|
| 12.5 | 160 | 16.5 | PCB-160165 | | | |
| 4 | | 175 | 8 | PCB-175080 | | |
| 7 | | | 11 | PCB-175110 | | |
| 9 | | | 12 | PCB-175120 | | |
| 11 | | | 13 | PCB-175130 | | |
| 15 | 15 | | PCB-175150 | | | |
| 12.5 | 200 | 16.5 | PCB-200165 | | | |
| 4 | | 200 | 12 | PCB-200120 | | |
| 7 | | | 250 | 15 | PCB-250120 | |
| 9 | | | | 250 | 16.5 | PCB-250165 |
| 11 | | | | | 250 | 18 |

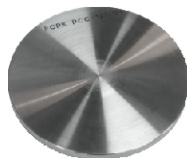


PCB



| 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 |
| 100 | 15 | PCC-090150 |
| | 16.5 | PCC-090165 |
| | 8 | PCC-100080 |
| 110 | 8 | PCC-110080 |
| | 12 | PCC-110120 |

| D | H | NR KAT. |
|-----|----|------------|
| 120 | 8 | PCC-120080 |
| | 12 | PCC-120120 |
| 125 | 8 | PCC-125080 |
| | 12 | PCC-125120 |
| 130 | 8 | PCC-130080 |
| | 12 | PCC-130120 |
| 140 | 8 | PCC-140080 |
| | 12 | 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 | 8 | PCC-250080 |
| | 12 | PCC-250120 |