







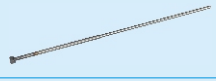



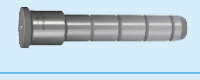







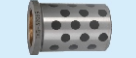
# CZĘŚCI ZNORMALIZOWANE DO FORM

STANDARD ELEMENTS FOR MOLDS



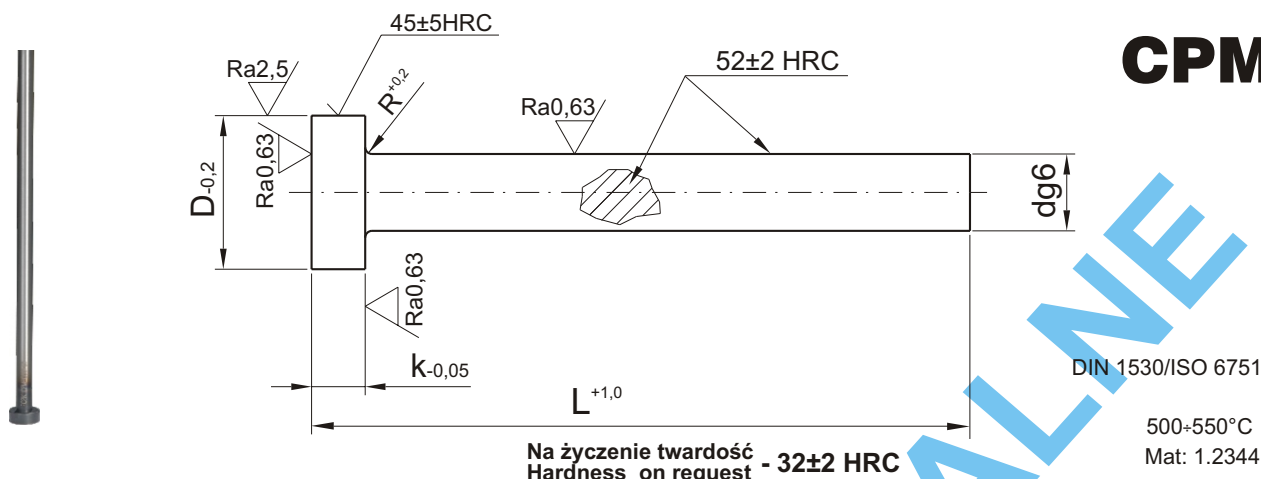
**CZĘŚCI ZNORMALIZOWANE DO FORM**  
**STANDARD ELEMENTS FOR MOLDS**

1

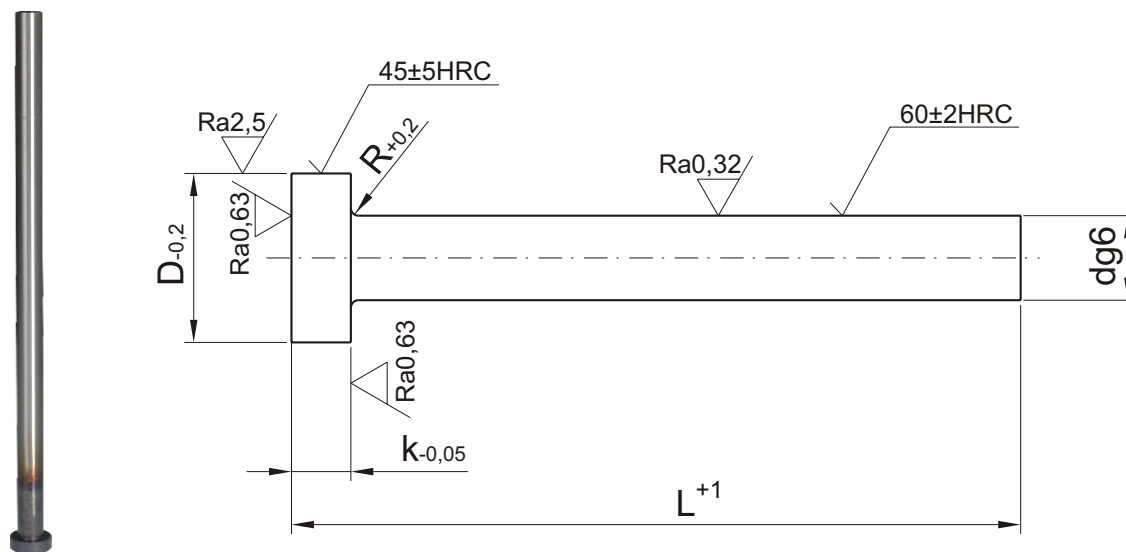
	NAZWA KATALOGOWA	CATALOG NAME	SYMBOL	STR./PG
	Rdzeń formujący	Core pins	CPM	3
	Wypychacz hartowany	Ejector pins hardened	WH-	4-5
	Wypychacz azotowany	Ejector pins nitrided	EM-	6-7
	Wypychacz tulejowy hartowany	Ejector sleeves hardened	WHT-	8-9
	Wypychacz tulejowy azotowany	Ejector sleeves nitrided	EMT-	10
	Wypychacz odsadzany azotowany	Step pins nitrided	ESM-	11
	Wypychacz odsadzany hartowany	Step pins hardened	OH-	11
	Wypychacz płaski hartowany	Flat ejector pins hardened	OHP-	12
	Wypychacz płaski azotowany	Flat ejector pins nitrided	ESP-	13
	Słup prowadzący	Leader pins	SLE-	14-16
	Słup prowadzący	Leader pins	SXE-	17-19
	Tuleja prowadząca	Leader pin bushings	TPE-	20
	Tuleja prowadząca	Leader pin bushings	TXE-	21
	Tuleja prowadząca - bronze rite™	Guide bushings - bronze rite™	TPB-	22
	Tuleja prowadząca - bronze rite™	Guide bushings - bronze rite™	TXB-	23
	Tuleja prowadząca samosmarująca	Self-lubricating guide bushings	TPG-	24
	Tuleja prowadząca samosmarująca	Self-lubricating guide bushings	TXG-	25
	Tuleja prowadząca - bronze rite™ samosmarująca	Self-lubricating guide bushings -bronze rite™	TPS-	26
	Tuleja prowadząca - bronze rite™ samosmarująca	Self-lubricating guide bushings -bronze rite™	TXS-	27

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

	NAZWA KATALOGOWA	CATALOG NAME	SYMBOL	STR./PG
	Tuleja ustalająca	Locating sleeves	TUE-	28
	Nóżka	Feet	NF	28
	Słup skośny	Angle pins	SS-	29
	Prowadzenie płyty wypychaczy	Ejection system		30
	Słup prowadzący	Leader pins	SPW	30
	Kołek prowadzący	Leader pins	KPW	30
	Koszyk kulkowy	Ball bearing cages	KKW-	31
	Tuleja do koszyka kulkowego	Bushings	TKW-	31
	Tuleja prowadząca - bronze rite TM	Guide bushings - bronze rite TM	TBW-	31
	Tuleja prowadząca samosmarująca	Self-lubricating guide bushings	TGW-	32
	Płytki samosmarujące	Wear plates self-lubricating	PFA-, PFB-	33
	Podkładka oporowa	Support washer	PO-	34
	Podkładka oporowa	Support washer	POA-	34
	Sworzeń płyty wypychaczy	Ejector rod	KWH-	35
	Tuleja prowadząca	Tube dowel	TPZ	36
	Tulejowy zabierak wlewka	Sprue pullers bushings	TZW-	37
	Tuleja wtryskowa	Sprue bushings	TWA- TWB-	38
	Tuleja wtryskowa	Sprue bushings	TWC- TWD-	39
	Pierścień centrujący	Locating rings	PCA-	40
	Pierścień centrujący	Locating rings	PCB-, PCC-	41



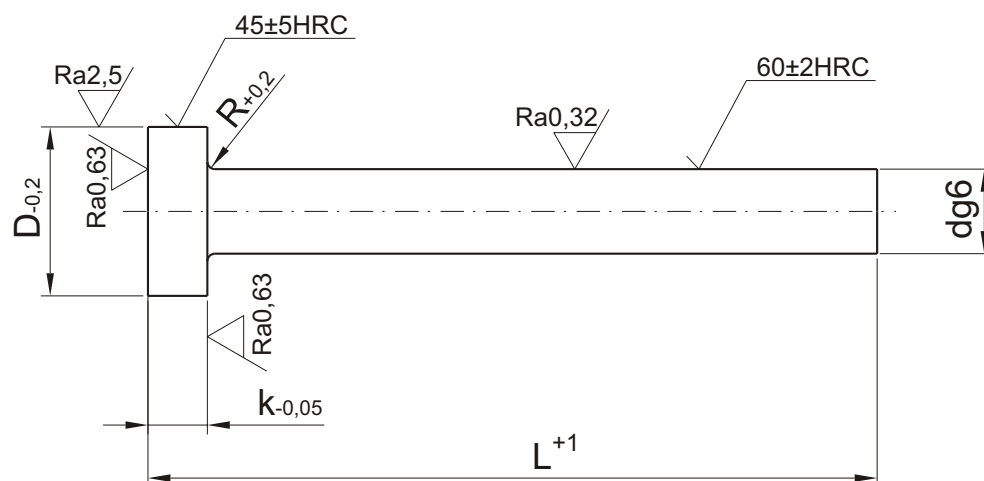
NR KAT.														
d	D	k	R	L										
				100	125	160	200	250	315	400	500	630	800	1000
1	2,5	1,2	0,2	CPM-010100		CPM-010160								
1,5	3	1,5		CPM-015100	CPM-015125	CPM-015160	CPM-015200							
2	4	2		CPM-020100	CPM-020125	CPM-020160	CPM-020200	CPM-020250						
2,2				CPM-022100	CPM-022125	CPM-022160	CPM-022200	CPM-022250						
2,5	5	CPM-025100		CPM-025125	CPM-025160	CPM-025200	CPM-025250							
2,7		CPM-027100		CPM-027125	CPM-027160	CPM-027200	CPM-027250							
3	6	0,3	CPM-030100	CPM-030125	CPM-030160	CPM-030200	CPM-030250	CPM-030315	CPM-030400	CPM-030500				
3,2			CPM-032100	CPM-032125	CPM-032160	CPM-032200	CPM-032250	CPM-032315	CPM-032400					
3,5	7		CPM-035100	CPM-035125	CPM-035160	CPM-035200	CPM-035250	CPM-035315	CPM-035400					
3,7			CPM-037100	CPM-037125	CPM-037160	CPM-037200	CPM-037250	CPM-037315	CPM-037400					
4	8		CPM-040100	CPM-040125	CPM-040160	CPM-040200	CPM-040250	CPM-040315	CPM-040400	CPM-040500				
4,2			CPM-042100	CPM-042125	CPM-042160	CPM-042200	CPM-042250	CPM-042315	CPM-042400	CPM-042500	CPM-042630			
4,5			CPM-045100	CPM-045125	CPM-045160	CPM-045200	CPM-045250	CPM-045315	CPM-045400					
5	10		CPM-050100	CPM-050125	CPM-050160	CPM-050200	CPM-050250	CPM-050315	CPM-050400	CPM-050500	CPM-050630	CPM-050800		
5,2			CPM-052100	CPM-052125	CPM-052160	CPM-052200	CPM-052250	CPM-052315	CPM-052400	CPM-052500	CPM-052630			
5,5			CPM-055100	CPM-055125	CPM-055160	CPM-055200	CPM-055250	CPM-055315	CPM-055400	CPM-055500	CPM-055630			
6	12		0,5	CPM-060100	CPM-060125	CPM-060160	CPM-060200	CPM-060250	CPM-060315	CPM-060400	CPM-060500	CPM-060630	CPM-060800	CPM-0601000
6,2				CPM-062100	CPM-062125	CPM-062160	CPM-062200	CPM-062250	CPM-062315	CPM-062400	CPM-062500	CPM-062630		
6,5		CPM-065100		CPM-065125	CPM-065160	CPM-065200	CPM-065250	CPM-065315	CPM-065400	CPM-065500				
7		CPM-070100		CPM-070125	CPM-070160	CPM-070200	CPM-070250	CPM-070315	CPM-070400	CPM-070500	CPM-070630			
7,5		CPM-075100		CPM-075125	CPM-075160	CPM-075200	CPM-075250	CPM-075315	CPM-075400	CPM-075500				
8		CPM-080100		CPM-080125	CPM-080160	CPM-080200	CPM-080250	CPM-080315	CPM-080400	CPM-080500	CPM-080630	CPM-080800	CPM-0801000	
8,2	14	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		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	CPM-100100		CPM-100125	CPM-100160	CPM-100200	CPM-100250	CPM-100315	CPM-100400	CPM-100500	CPM-100630	CPM-100800	CPM-1001000	
10,2		CPM-102100		CPM-102125	CPM-102160	CPM-102200	CPM-102250	CPM-102315	CPM-102400	CPM-102500	CPM-102630	CPM-102800		
10,5		CPM-105100	CPM-105125	CPM-105160	CPM-105200	CPM-105250	CPM-105315	CPM-105400	CPM-105500	CPM-105630				
11		CPM-110100	CPM-110125	CPM-110160	CPM-110200	CPM-110250	CPM-110315	CPM-110400	CPM-110500	CPM-110630				
12	18	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			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	CPM-160100		CPM-160125	CPM-160160	CPM-160200	CPM-160250	CPM-160315	CPM-160400	CPM-160500	CPM-160630	CPM-160800	CPM-1601000		
18	24		CPM-180100	CPM-180125	CPM-180160	CPM-180200	CPM-180250	CPM-180315	CPM-180400	CPM-180500	CPM-180630	CPM-180800	CPM-1801000	
20	26		8	CPM-200100	CPM-200125	CPM-200160	CPM-200200	CPM-200250	CPM-200315	CPM-200400	CPM-200500	CPM-200630	CPM-200800	CPM-2001000
25	32		10	1			CPM-250160	CPM-250200	CPM-250250	CPM-250315	CPM-250400	CPM-250500	CPM-250630	CPM-250800
32	40				CPM-320160	CPM-320200	CPM-320250	CPM-320315	CPM-320400	CPM-320500	CPM-320630	CPM-320800	CPM-3201000	

**WH**

DIN 1530/ISO 6751  
250°C

Mat: 1.2210

Hartowany:  
Hardened: 60±2 HRC

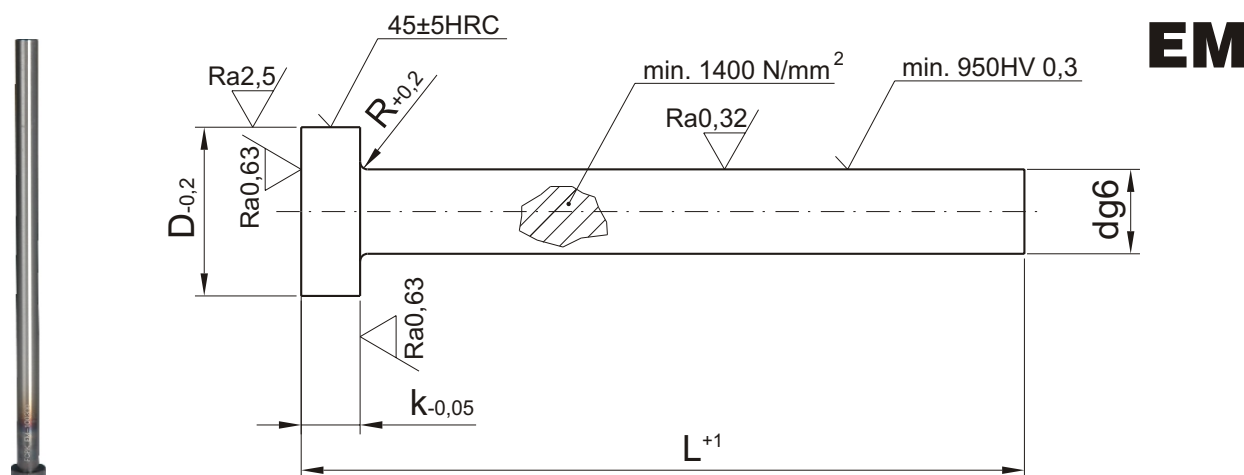
d	D	k	R	NR KAT.							
				L							
				80	100	125	160	200	250	315	400
1,5	3	1,5	0,2	WH-015080	WH-015100	WH-015125	WH-015160	WH-015200			
1,6				WH-016080	WH-016100	WH-016125	WH-016160	WH-016200			
1,7					WH-017100	WH-017125	WH-017160	WH-017200			
1,8					WH-018100	WH-018125	WH-018160	WH-018200			
2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


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



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

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

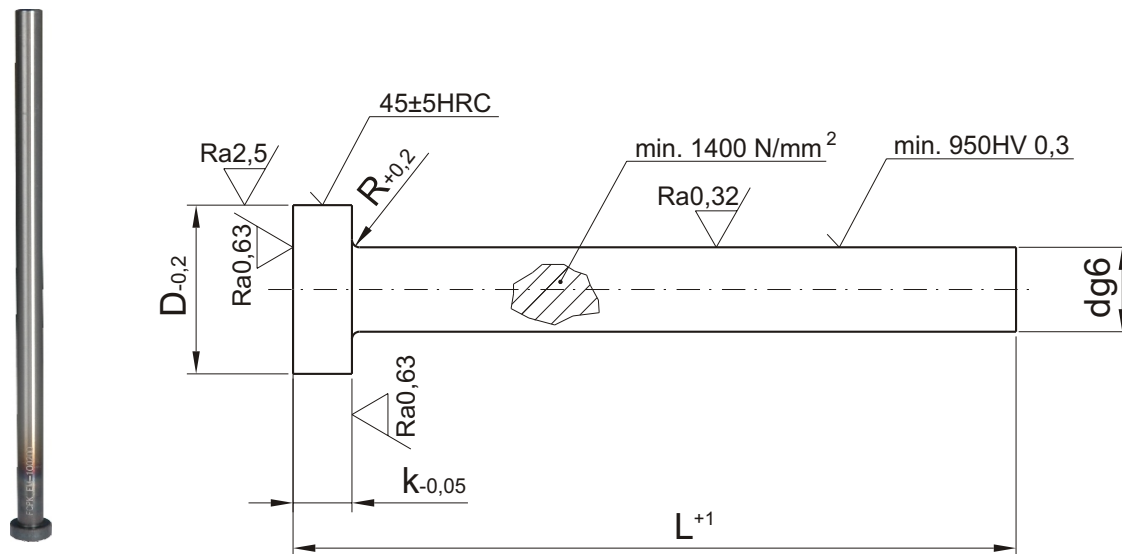
d	D	k	R
5	10	3	0,3
5,1			
5,2			
5,5	12	5	0,5
6			
6,1			
6,2			
6,5			
7			

DIN 1530/ISO 6751  
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		



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			
12,2	18	7	0,8
12,5			
14	22		

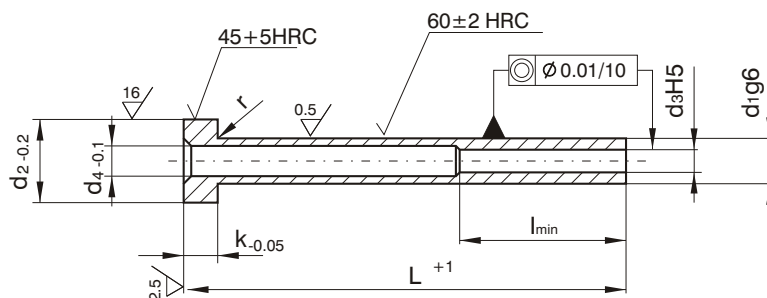
d	D	k	R
14,2	22	7	0,8
16			
16,2			
18	24	8	1
20	26		
25	32		
32	40		

DIN 1530/ISO 6751  
500÷550°C

Mat: 1.2344  
Azotowany  
Nitrided

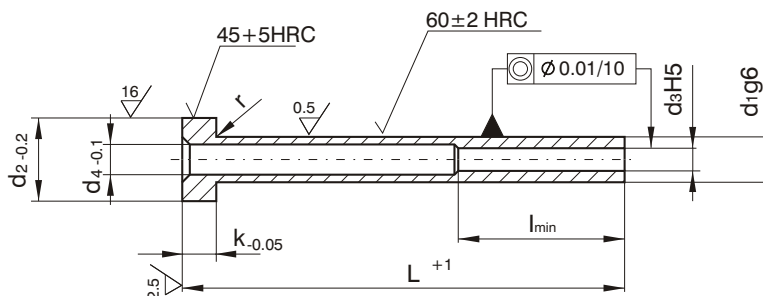
NR KAT.											
d	L										
	100	125	160	200	250	315	400	500	630	800	1000
7,5	EM-075100	EM-075125	EM-075160	EM-075200	EM-075250	EM-075315	EM-075400	EM-075500			
8	EM-080100	EM-080125	EM-080160	EM-080200	EM-080250	EM-080315	EM-080400	EM-080500	EM-080630	EM-080800	EM-0801000
8,1			EM-081160		EM-081250						
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





Mat: 1.2210

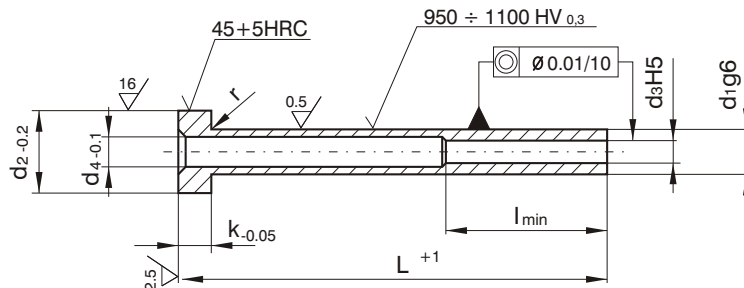
d3	d1	d2	k	d4	Lmin	L				
						60	75	100	125	150
1,5	3	6	3	1,9	35	WHT-01503060	WHT-01503075	WHT-01503100	WHT-01503125	WHT-01503150
1,6				2,0		WHT-01603060	WHT-01603075	WHT-01603100	WHT-01603125	WHT-01603150
2,0	4	8		2,4		WHT-02004060	WHT-02004075	WHT-02004100	WHT-02004125	WHT-02004150
2,2				2,5		WHT-02204060	WHT-02204075	WHT-02204100	WHT-02204125	WHT-02204150
2,5	5	10		3,0	45	WHT-02505060	WHT-02505075	WHT-02505100	WHT-02505125	WHT-02505150
2,7						WHT-02705060	WHT-02705075	WHT-02705100	WHT-02705125	WHT-02705150
3,0				3,3		WHT-03005060	WHT-03005075	WHT-03005100	WHT-03005125	WHT-03005150
3,2				3,5		WHT-03205060	WHT-03205075	WHT-03205100	WHT-03205125	WHT-03205150
3,5				4,0		----	----	WHT-03505100	WHT-03505125	----
3,5	6	12	5			WHT-03506060	WHT-03506075	WHT-03506100	WHT-03506125	WHT-03506150
3,7						WHT-03706060	WHT-03706075	WHT-03706100	WHT-03706125	WHT-03706150
4,0				4,5		WHT-04006060	WHT-04006075	WHT-04006100	WHT-04006125	WHT-04006150
4,0	8	14		4,3		WHT-04008060	WHT-04008075	WHT-04008100	WHT-04008125	WHT-04008150
4,2				5,0		WHT-04208060	WHT-04208075	WHT-04208100	WHT-04208125	WHT-04208150
5,0				5,3		WHT-05008060	WHT-05008075	WHT-05008100	WHT-05008125	WHT-05008150
5,2				5,5		WHT-05208060	WHT-05208075	WHT-05208100	WHT-05208125	WHT-05208150
5,5				6,0		WHT-05508060	WHT-05508075	WHT-05508100	WHT-05508125	WHT-05508150
6,0	10	16		6,3		WHT-06010060	WHT-06010075	WHT-06010100	WHT-06010125	WHT-06010150
6,2				6,5		WHT-06210060	WHT-06210075	WHT-06210100	WHT-06210125	WHT-06210150
6,5				8,0		WHT-06510060	WHT-06510075	WHT-06510100	WHT-06510125	WHT-06510150
7,0						----	WHT-07010075	WHT-07010100	WHT-07010125	----
8,0	12	20	7	10,0		WHT-08012060	WHT-08012075	WHT-08012100	WHT-08012125	WHT-08012150
8,2						WHT-08212060	WHT-08212075	WHT-08212100	WHT-08212125	WHT-08212150
8,5						WHT-08512060	WHT-08512075	WHT-08512100	WHT-08512125	WHT-08512150
10,0	14	22		10,5			WHT-10014075	WHT-10014100	WHT-10014125	WHT-10014150
10,5				11,0			WHT-10514075	WHT-10514100	WHT-10514125	WHT-10514150
11,0				12,0			----	WHT-11014100	WHT-11014125	WHT-11014150
12,0	16			12,5			WHT-12016075	WHT-12016100	WHT-12016125	WHT-12016150
12,5				13,0			WHT-12516075	WHT-12516100	WHT-12516125	WHT-12516150



Mat: 1.2210

d3	d1	d2	k	d4	lmin	L			
						175	200	225	250
1,5	3	6	3	1,9	35	WHT-01503175			
1,6				2,0		WHT-01603175			
2,0	4	8		2,4		WHT-02004175	WHT-02004200	WHT-02004225	WHT-02004250
2,2				2,5		WHT-02204175	WHT-02204200	WHT-02204225	WHT-02204250
2,5	5	10		3,0	45	WHT-02505175	WHT-02505200	WHT-02505225	WHT-02505250
2,7						WHT-02705175	WHT-02705200	WHT-02705225	WHT-02705250
3,0				3,3		WHT-03005175	WHT-03005200	WHT-03005225	WHT-03005250
3,2				3,5		WHT-03205175	WHT-03205200	WHT-03205225	WHT-03205250
3,5	6	12	5	4,0		WHT-03506175	WHT-03506200	WHT-03506225	WHT-03506250
3,7						WHT-03706175	WHT-03706200	WHT-03706225	WHT-03706250
4,0				4,5		WHT-04006175	WHT-04006200	WHT-04006225	WHT-04006250
4,0	8	14		4,3		WHT-04008175	WHT-04008200	WHT-04008225	WHT-04008250
4,2				5,0		WHT-04208175	WHT-04208200	WHT-04208225	WHT-04208250
5,0				5,3		WHT-05008175	WHT-05008200	WHT-05008225	WHT-05008250
5,2				5,5		WHT-05208175	WHT-05208200	WHT-05208225	WHT-05208250
5,5				6,0		WHT-05508175	WHT-05508200	WHT-05508225	WHT-05508250
6,0	10	16		6,3		WHT-06010175	WHT-06010200	WHT-06010225	WHT-06010250
6,2				6,5		WHT-06210175	WHT-06210200	WHT-06210225	WHT-06210250
6,5				8,0		WHT-06510175	WHT-06510200	WHT-06510225	----
7,0						----	WHT-07010200	WHT-07010225	WHT-07010250
8,0	12	20	7	10,0		WHT-08012175	WHT-08012200	WHT-08012225	WHT-08012250
8,2						WHT-08212175	WHT-08212200	WHT-08212225	WHT-08212250
8,5						WHT-08512175	WHT-08512200	WHT-08512225	WHT-08512250
10,0	14	22		10,5		WHT-10014175	WHT-10014200	WHT-10014225	WHT-10014250
10,5				11,0		WHT-10514175	WHT-10514200	WHT-10514225	WHT-10514250
11,0				12,0		WHT-11014175	WHT-11014200	WHT-11014225	WHT-11014250
12,0	16			12,5		WHT-12016175	WHT-12016200	WHT-12016225	WHT-12016250
12,5				13,0		WHT-12516175	WHT-12516200	WHT-12516225	WHT-12516250

d3	d1	d2	k	d4	lmin	L			
						275	300	325	350
2,5	5	10	3	3,0	45	WHT-02505275			
2,7						WHT-02705275			
3,0				3,3		WHT-03005275	WHT-03005300		
3,2				3,5		WHT-03205275	WHT-03205300		
3,5	6	12	5	4,0		WHT-03506275	WHT-03506300		
3,7						WHT-03706275	WHT-03706300		
4,0				4,5		WHT-04006275	WHT-04006300		
4,0	8	14		4,3		WHT-04008275	WHT-04008300	WHT-04008325	
4,2				5,0		WHT-04208275	WHT-04208300	WHT-04208325	
5,0				5,3		WHT-05008275	WHT-05008300	WHT-05008325	
5,2				5,5		WHT-05208275	WHT-05208300	WHT-05208325	
5,5				6,0		WHT-05508275	WHT-05508300	WHT-05508325	
6,0	10	16		6,3		WHT-06010275	WHT-06010300	WHT-06010325	WHT-06010350
6,2				6,5		WHT-06210275	WHT-06210300	WHT-06210325	----
6,5				8,0		WHT-06510275	WHT-06510300	WHT-06510325	WHT-06510350
8,0	12	20	7	10,0		WHT-08012275	WHT-08012300	WHT-08012325	WHT-08012350
8,2						WHT-08212275	----	WHT-08212325	WHT-08212350
10,0	14	22		10,5		WHT-10014275	WHT-10014300	WHT-10014325	----
10,5				11,0		WHT-10514275	WHT-10514300	WHT-10514325	WHT-10514350
11,0				12,0		WHT-11014275	----	----	
12,0	16			12,5		WHT-12016275	WHT-12016300	----	
12,5				13,0		WHT-12516275		WHT-12516325	

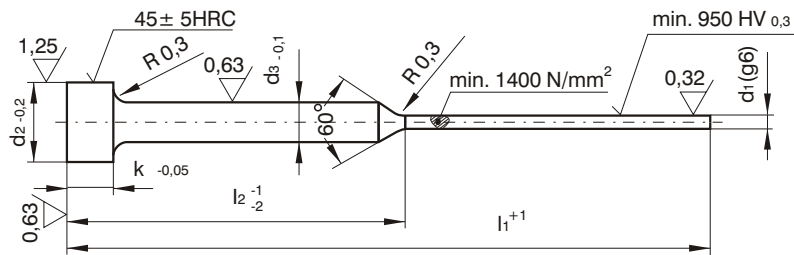


Mat: 1.2344

Azotowany  
Nitrided

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

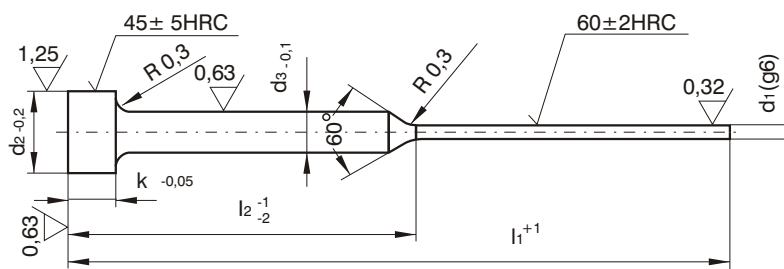
d3	d1	d2	k	d4	l <sub>min</sub>	L			
						200	225	250	275
2,0	4	8	3	2,4	35	EMT-02004200			
3,0	5	10		3,3	45	EMT-03005200	EMT-03005225		
3,2				3,5		EMT-03205200	EMT-03205225		
3,5	6	12	5	4,0		EMT-03506200	----		
4,0				4,5		EMT-04006200	EMT-04006225		
4,2	8	14		5,0		EMT-04208200	EMT-04208225		
5,0		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


**ESM**

Mat: 1.2344  
Azotowany  
Nitrided

DIN 1530 FORM C-WAS  
500÷550°C

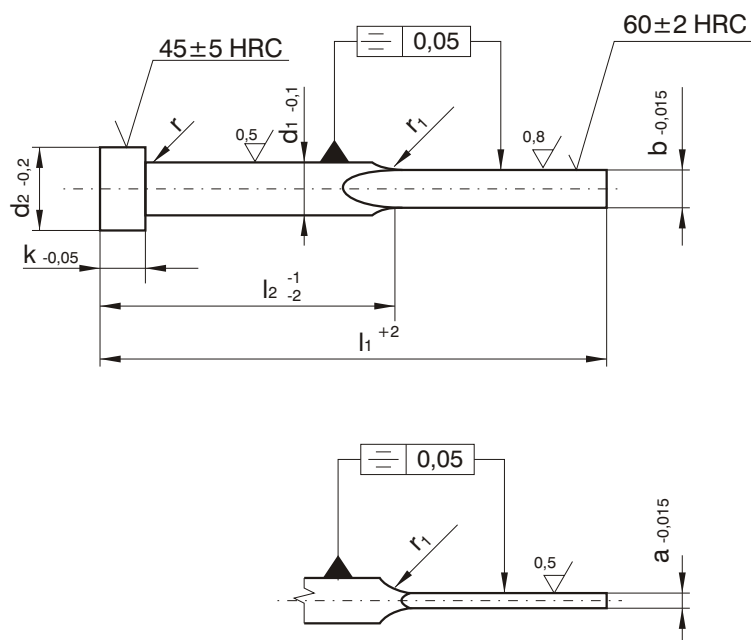
d <sub>1</sub>	d <sub>2</sub>	d <sub>3</sub>	k	NR KAT.				
				I <sub>2</sub> =35 I <sub>1</sub> =80	I <sub>2</sub> =50 I <sub>1</sub> =100	I <sub>2</sub> =50 I <sub>1</sub> =125	I <sub>2</sub> =75 I <sub>1</sub> =160	I <sub>2</sub> =75 I <sub>1</sub> =200
0,8	4	2	2	ESM-0835080	ESM-0850100	ESM-0850125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


**OH**

Mat: 1.2210

DIN 1530 FORM C-WS  
250° C

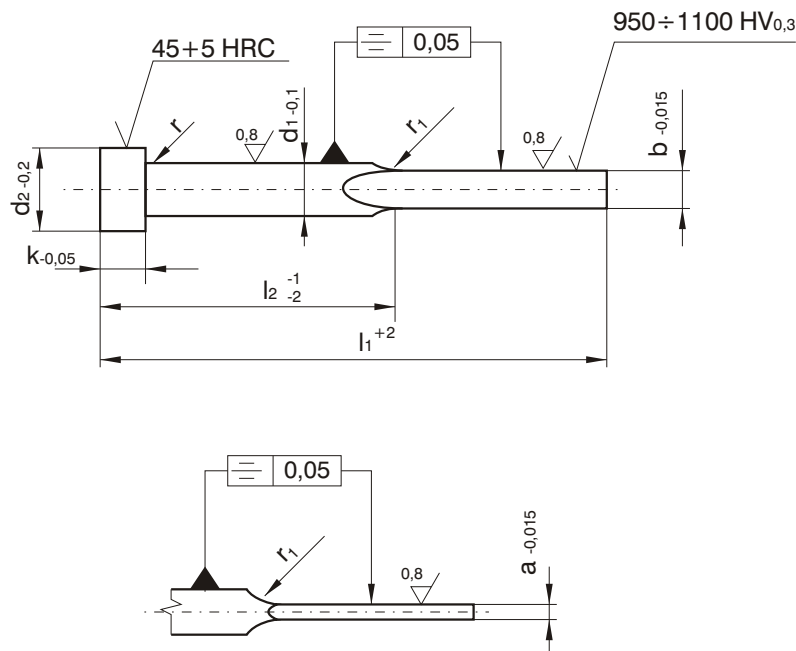
d <sub>1</sub>	d <sub>2</sub>	d <sub>3</sub>	k	NR KAT.				
				I <sub>2</sub> =35 I <sub>1</sub> =80	I <sub>2</sub> =50 I <sub>1</sub> =100	I <sub>2</sub> =50 I <sub>1</sub> =125	I <sub>2</sub> =75 I <sub>1</sub> =160	I <sub>2</sub> =75 I <sub>1</sub> =200
0,8	4	2	2	OH - 080080	OH - 080100	OH - 080125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

**OHP**


Mat: 1.2210

b	a	d <sub>1</sub>	d <sub>2</sub>	k	NR KATALOGOWY				
					I <sub>1</sub> =80	I <sub>1</sub> =100	I <sub>1</sub> =125	I <sub>1</sub> =160	I <sub>1</sub> =200
					I <sub>2</sub> =40	I <sub>2</sub> =50	I <sub>2</sub> =60	I <sub>2</sub> =80	I <sub>2</sub> =100
3,8	0,8	4,2	8	3	OHP-03808080	OHP-03808100	OHP-03808125		
	1,0				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	3	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 <sub>1</sub>	d <sub>2</sub>	k	NR KATALOGOWY					
					I <sub>1</sub> =100	I <sub>1</sub> =125	I <sub>1</sub> =160	I <sub>1</sub> =200	I <sub>1</sub> =250	I <sub>1</sub> =315
					I <sub>2</sub> =50	I <sub>2</sub> =60	I <sub>2</sub> =80	I <sub>2</sub> =100	I <sub>2</sub> =125	I <sub>2</sub> =160
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	5	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	5			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



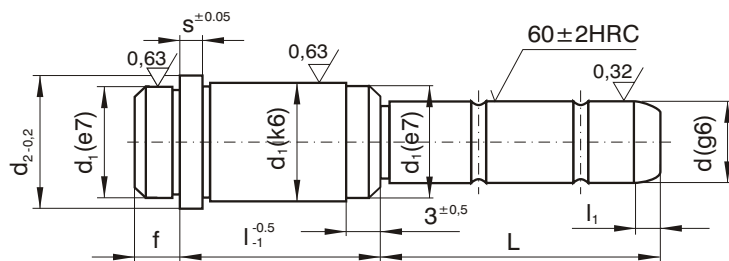
Mat: 1.2344

Azotowany  
Nitrided

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

b	a	d <sub>1</sub>	d <sub>2</sub>	k	NR KATALOGOWY					
					I <sub>1</sub> =125	I <sub>1</sub> =160	I <sub>1</sub> =200	I <sub>1</sub> =250	I <sub>1</sub> =315	I <sub>1</sub> =400
					I <sub>2</sub> =60	I <sub>2</sub> =80	I <sub>2</sub> =100	I <sub>2</sub> =125	I <sub>2</sub> =160	I <sub>2</sub> =200
7,5	1,2	8,0	14	5	ESP-07512125	ESP-07512160	ESP-07512200			
	1,5				ESP-07515125	ESP-07515160	ESP-07515200	ESP-07515250		
	2,0					ESP-07520160	ESP-07520200	ESP-07520250	ESP-07520315	
9,5	1,5	10	16	5		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

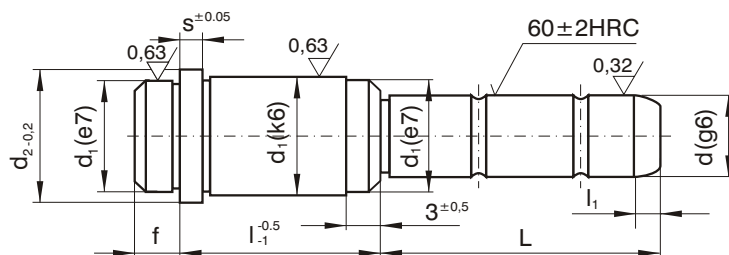
14

**SLE**Mat: 1.7131  
Nawęglany  
Carbonized

d	d <sub>1</sub>	d <sub>2</sub>	s	f	l <sub>1</sub>	I	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
							95	SLE-14017095	SLE-15017095
						22	30	SLE-14022030	SLE-15022030
							50	SLE-14022050	SLE-15022050
							70	SLE-14022070	SLE-15022070
							90	SLE-14022090	SLE-15022090
							110	SLE-14022110	SLE-15022110
							125	SLE-14022125	SLE-15022125
							150	SLE-14022150	SLE-15022150
						27	30	SLE-14027030	SLE-15027030
							45	SLE-14027045	SLE-15027045
							65	SLE-14027065	SLE-15027065
							85	SLE-14027085	SLE-15027085
							105	SLE-14027105	SLE-15027105
							125	SLE-14027125	SLE-15027125
							145	SLE-14027145	SLE-15027145
							165	SLE-14027165	SLE-15027165
						36	35	SLE-14036035	SLE-15036035
							55	SLE-14036055	SLE-15036055
							75	SLE-14036075	SLE-15036075
							95	SLE-14036095	SLE-15036095
							125	SLE-14036125	SLE-15036125

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



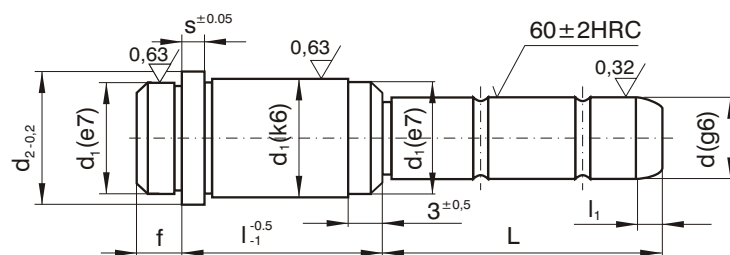

**SLE**

Mat: 1.7131  
Nawęglany  
Carbonized

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

d	d <sub>1</sub>	d <sub>2</sub>	s	f	l <sub>1</sub>	I	L	NR KAT.	NR KAT.
22/24	30	35	6	9	7	36	35	SLE-22036035	SLE-24036035
							55	SLE-22036055	SLE-24036055
							75	SLE-22036075	SLE-24036075
							95	SLE-22036095	SLE-24036095
							115	SLE-22036115	SLE-24036115
							135	SLE-22036135	SLE-24036135
							165	SLE-22036165	SLE-24036165
							205	SLE-22036205	SLE-24036205
							245	SLE-22036245	SLE-24036245
							285	SLE-22036285	SLE-24036285
						46	35	SLE-22046035	SLE-24046035
							45	SLE-22046045	SLE-24046045
							65	SLE-22046065	SLE-24046065
							85	SLE-22046085	SLE-24046085
							105	SLE-22046105	SLE-24046105
							125	SLE-22046125	SLE-24046125
							165	SLE-22046165	SLE-24046165
							205	SLE-22046205	SLE-24046205
						56	35	SLE-22056035	SLE-24056035
							55	SLE-22056055	SLE-24056055
							75	SLE-22056075	SLE-24056075
							95	SLE-22056095	SLE-24056095
							115	SLE-22056115	SLE-24056115
							165	SLE-22056165	SLE-24056165
							205	SLE-22056205	SLE-24056205
						66	35	SLE-22066035	SLE-24066035
							55	SLE-22066055	SLE-24066055
							75	SLE-22066075	SLE-24066075
							95	SLE-22066095	SLE-24066095
							155	SLE-22066155	SLE-24066155
						76	55	SLE-22076055	SLE-24076055
							75	SLE-22076075	SLE-24076075
							95	SLE-22076095	SLE-24076095
							115	SLE-22076115	SLE-24076115
							145	SLE-22076145	SLE-24076145
						86	55	SLE-22086055	SLE-24086055
							75	SLE-22086075	SLE-24086075
							95	SLE-22086095	SLE-24086095
							135	SLE-22086135	SLE-24086135
						96	55	SLE-22096055	SLE-24096055
							75	SLE-22096075	SLE-24096075
							95	SLE-22096095	SLE-24096095
							125	SLE-22096125	SLE-24096125
						116	75	SLE-22116075	SLE-24116075
							115	SLE-22116115	SLE-24116115
							155	SLE-22116155	SLE-24116155
						136	95	SLE-22136095	SLE-24136095
							135	SLE-22136135	SLE-24136135
						156	155	SLE-22156155	SLE-24156155



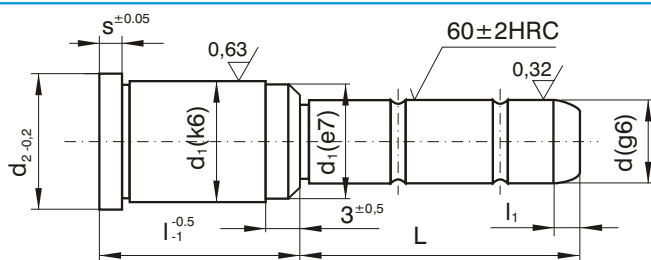


# SLE

Mat: 1.7131  
Nawęglany  
Carbonized

d	d <sub>1</sub>	d <sub>2</sub>	s	f	l <sub>1</sub>	l	L	NR KAT.	NR KAT.
30/32	42	47	6	9	7	27	45	SLE-30027045	SLE 32027045
							65	SLE-30027065	SLE 32027065
							105	SLE-30027105	SLE 32027105
							165	SLE-30027165	SLE-32027165
							185	SLE-30027185	SLE-32027185
							245	SLE-30027245	SLE-32027245
							285	SLE-30027285	SLE-32027285
						36	55	SLE-30036055	SLE 32036055
							75	SLE 30036075	SLE 32036075
							95	SLE-30036095	SLE-32036095
							115	SLE-30036115	SLE-32036115
							155	SLE-30036155	SLE-32036155
							245	SLE-30036245	SLE-32036245
							285	SLE-30036285	SLE-32036285
						46	45	SLE-30046045	SLE 32046045
							65	SLE-30046065	SLE-32046065
							85	SLE-30046085	SLE-32046085
							105	SLE-30046105	SLE 32046105
							125	SLE-30046125	SLE-32046125
							165	SLE-30046165	SLE-32046165
							245	SLE-30046245	SLE-32046245
						285	SLE-30046285	SLE-32046285	
						56	55	SLE-30056055	SLE-32056055
							75	SLE-30056075	SLE-32056075
							95	SLE-30056095	SLE 32056095
							115	SLE-30056115	SLE-32056115
							135	SLE-30056135	SLE-32056135
							175	SLE-30056175	SLE-32056175
							245	SLE-30056245	SLE-32056245
						295	SLE-30056295	SLE-32056295	
						66	55	SLE-30066055	SLE-32066055
							75	SLE-30066075	SLE-32066075
							95	SLE-30066095	SLE-32066095
							115	SLE-30066115	SLE-32066115
							135	SLE-30066135	SLE-32066135
							175	SLE 30066175	SLE 32066175
							245	SLE-30066245	SLE 32066245
						295	SLE-30066295	SLE-32066295	
						76	55	SLE-30076055	SLE-32076055
							75	SLE-30076075	SLE-32076075
							95	SLE-30076095	SLE-32076095
							115	SLE-30076115	SLE-32076115
							155	SLE-30076155	SLE-32076155
							225	SLE-30076225	SLE-32076225
							86	55	SLE-30086055
						75		SLE-30086075	SLE-32086075
						95		SLE-30086095	SLE-32086095
						115		SLE-30086115	SLE-32086115
155	SLE-30086155	SLE-32086155							
225	SLE-30086225	SLE-32086225							

[illegible]

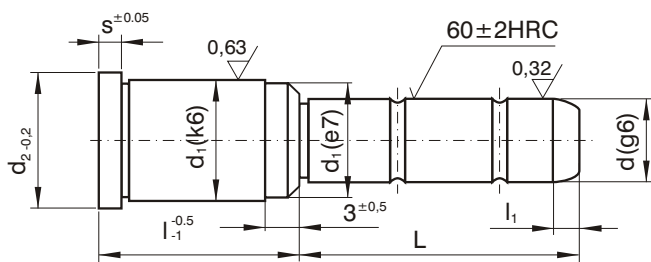
**SXE**Mat: 1.7131  
Nawęglany  
Carbonized

17

d	d <sub>1</sub>	d <sub>2</sub>	s	l <sub>1</sub>	I	L	NR KAT.	NR KAT.
9/10	14	16	3	4	17	20	SXE-09017020	SXE-10017020
						30	SXE-09017030	SXE-10017030
						22	SXE-09022025	SXE-10022025
						35	SXE-09022035	SXE-10022035
						55	SXE-09022055	SXE-10022055
						27	SXE-09027030	SXE-10027030
					36	50	SXE-09027050	SXE-10027050
						25	SXE-09036025	SXE-10036025
						45	SXE-09036045	SXE-10036045
					46	30	SXE-09046030	SXE-10046030
						45	SXE-09046045	SXE-10046045
14/15	20	25	6	7	22	20	SXE-14022020	SXE-15022020
						35	SXE-14022035	SXE-15022035
						40	SXE-14022040	SXE-15022040
						45	SXE-14022045	SXE-15022045
						50	SXE-14022050	SXE-15022050
						55	SXE-14022055	SXE-15022055
						65	SXE-14022065	SXE-15022065
						70	SXE-14022070	SXE-15022070
						90	SXE-14022090	SXE-15022090
						110	SXE-14022110	SXE-15022110
					27	20	SXE-14027020	SXE-15027020
						35	SXE-14027035	SXE-15027035
						40	SXE-14027040	SXE-15027040
						45	SXE-14027045	SXE-15027045
						55	SXE-14027055	SXE-15027055
						65	SXE-14027065	SXE-15027065
						85	SXE-14027085	SXE-15027085
						105	SXE-14027105	SXE-15027105
					36	20	SXE-14036020	SXE-15036020
						35	SXE-14036035	SXE-15036035
						40	SXE-14036040	SXE-15036040
						45	SXE-14036045	SXE-15036045
						55	SXE-14036055	SXE-15036055
						65	SXE-14036065	SXE-15036065
						75	SXE-14036075	SXE-15036075
						95	SXE-14036095	SXE-15036095
					46	20	SXE-14046020	SXE-15046020
						35	SXE-14046035	SXE-15046035
						45	SXE-14046045	SXE-15046045
						65	SXE-14046065	SXE-15046065
						85	SXE-14046085	SXE-15046085
						105	SXE-14046105	SXE-15046105
					56	20	SXE-14056020	SXE-15056020
						35	SXE-14056035	SXE-15056035
						55	SXE-14056055	SXE-15056055
						75	SXE-14056075	SXE-15056075
						95	SXE-14056095	SXE-15056095
					66	55	SXE-14066055	SXE-15066055
						65	SXE-14066065	SXE-15066065

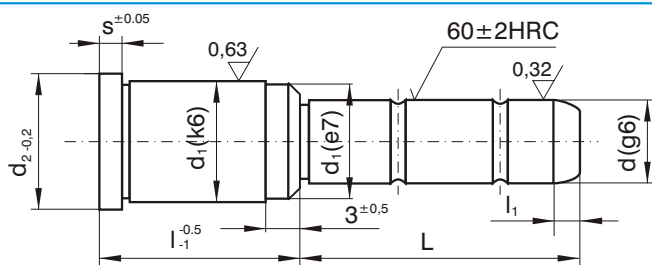
d	d <sub>1</sub>	d <sub>2</sub>	s	l <sub>1</sub>	I	L	NR KAT.	NR KAT.
14/15	20	25	6	7	66	95	SXE-14066095	SXE-15066095
						76	SXE-14076055	SXE-15076055
						55	SXE-14076095	SXE-15076095
						86	SXE-14086055	SXE-15086055
						95	SXE-14086095	SXE-15086095
18/20	26	31	6	7	22	20	SXE-18022020	SXE-20022020
						35	SXE-18022035	SXE-20022035
						40	SXE-18022040	SXE-20022040
						45	SXE-18022045	SXE-20022045
						50	SXE-18022050	SXE-20022050
						55	SXE-18022055	SXE-20022055
						60	SXE-18022060	SXE-20022060
						65	SXE-18022065	SXE-20022065
						70	SXE-18022070	SXE-20022070
						80	SXE-18022080	SXE-20022080
						85	SXE-18022085	SXE-20022085
						115	SXE-18022115	SXE-20022115
					27	20	SXE-18027020	SXE-20027020
						35	SXE-18027035	SXE-20027035
						40	SXE-18027040	SXE-20027040
						45	SXE-18027045	SXE-20027045
						50	SXE-18027050	SXE-20027050
						55	SXE-18027055	SXE-20027055
						60	SXE-18027060	SXE-20027060
						65	SXE-18027065	SXE-20027065
						70	SXE-18027070	SXE-20027070
						80	SXE-18027080	SXE-20027080
						85	SXE-18027085	SXE-20027085
						105	SXE-18027105	SXE-20027105
						125	SXE-18027125	SXE-20027125
					36	20	SXE-18036020	SXE-20036020
						35	SXE-18036035	SXE-20036035
						40	SXE-18036040	SXE-20036040
						45	SXE-18036045	SXE-20036045
						50	SXE-18036050	SXE-20036050
						55	SXE-18036055	SXE-20036055
						60	SXE-18036060	SXE-20036060
						65	SXE-18036065	SXE-20036065
						70	SXE-18036070	SXE-20036070
						75	SXE-18036075	SXE-20036075
					46	80	SXE-18036080	SXE-20036080
						95	SXE-18036095	SXE-20036095
						115	SXE-18036115	SXE-20036115
						135	SXE-18036135	SXE-20036135
						20	SXE-18046020	SXE-20046020
						45	SXE-18046045	SXE-20046045
						65	SXE-18046065	SXE-20046065
						85	SXE-18046085	SXE-20046085
						105	SXE-18046105	SXE-20046105
						135	SXE-18046135	SXE-20046135

18

**SXE**Mat: 1.7131  
Nawęglany  
Carbonized

d	d <sub>1</sub>	d <sub>2</sub>	s	I <sub>1</sub>	I	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	
						55	SXE-18056055	SXE-20056055	
						75	SXE-18056075	SXE-20056075	
						95	SXE-18056095	SXE-20056095	
					66	55	SXE-18066055	SXE-20066055	
						75	SXE-18066075	SXE-20066075	
						95	SXE-18066095	SXE-20066095	
					76	55	SXE-18076055	SXE-20076055	
						75	SXE-18076075	SXE-20076075	
						95	SXE-18076095	SXE-20076095	
					86	55	SXE-18086055	SXE-20086055	
						75	SXE-18086075	SXE-20086075	
						95	SXE-18086095	SXE-20086095	
					96	55	SXE-18096055	SXE-20096055	
						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	
						60	SXE-22027060	SXE-24027060	
						65	SXE-22027065	SXE-24027065	
						70	SXE-22027070	SXE-24027070	
						80	SXE-22027080	SXE-24027080	
						85	SXE-22027085	SXE-24027085	
						105	SXE-22027105	SXE-24027105	
						125	SXE-22027125	SXE-24027125	
						165	SXE-22027165	SXE-24027165	
						36	25	SXE-22036025	SXE-24036025
							45	SXE-22036045	SXE-24036045
							50	SXE-22036050	SXE-24036050
							55	SXE-22036055	SXE-24036055
					60		SXE-22036060	SXE-24036060	
					70		SXE-22036070	SXE-24036070	
					75		SXE-22036075	SXE-24036075	
					80		SXE-22036080	SXE-24036080	
					95		SXE-22036095	SXE-24036095	
					115		SXE-22036115	SXE-24036115	
					46	135	SXE-22036135	SXE-24036135	
						165	SXE-22036165	SXE-24036165	
						46	25	SXE-22046025	SXE-24046025
							45	SXE-22046045	SXE-24046045
							50	SXE-22046050	SXE-24046050
							60	SXE-22046060	SXE-24046060
							65	SXE-22046065	SXE-24046065
							70	SXE-22046070	SXE-24046070
							80	SXE-22046080	SXE-24046080
							85	SXE-22046085	SXE-24046085
					105		SXE-22046105	SXE-24046105	

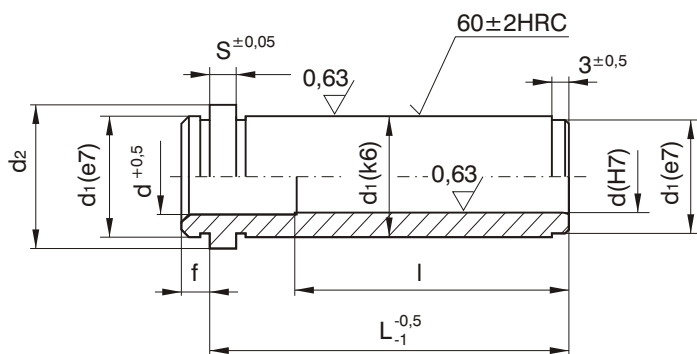
d	d <sub>1</sub>	d <sub>2</sub>	s	I <sub>1</sub>	I	L	NR KAT.	NR KAT.
22/24	30	35	6	7	46	125	SXE-22046125	SXE-24046125
						165	SXE-22046165	SXE-24046165
					56	25	SXE-22056025	SXE-24056025
						45	SXE-22056045	SXE-24056045
						55	SXE-22056055	SXE-24056055
						75	SXE-22056075	SXE-24056075
						95	SXE-22056095	SXE-24056095
						115	SXE-22056115	SXE-24056115
						165	SXE-22056165	SXE-24056165
						66	55	SXE-22066055
					75		SXE-22066075	SXE-24066075
					95		SXE-22066095	SXE-24066095
					76	25	SXE-22076025	SXE-24076025
						45	SXE-22076045	SXE-24076045
						55	SXE-22076055	SXE-24076055
						75	SXE-22076075	SXE-24076075
						95	SXE-22076095	SXE-24076095
					86	55	SXE-22086055	SXE-24086055
						75	SXE-22086075	SXE-24086075
						95	SXE-22086095	SXE-24086095
					96	55	SXE-22096055	SXE-24096055
						75	SXE-22096075	SXE-24096075
						95	SXE-22096095	SXE-24096095
					116	75	SXE-22116075	SXE-24116075
						115	SXE-22116115	SXE-24116115
						155	SXE-22116155	SXE-24116155
					136	135	SXE-22136135	SXE-24136135
					30/32	42	47	6
65	SXE-30027065	SXE-32027065						
105	SXE-30027105	SXE-32027105						
165	SXE-30027165	SXE-32027165						
36	55	SXE-30036055	SXE-32036055					
	75	SXE-30036075	SXE-32036075					
	95	SXE-30036095	SXE-32036095					
	115	SXE-30036115	SXE-32036115					
	155	SXE-30036155	SXE-32036155					
46	45	SXE-30046045	SXE-32046045					
	65	SXE-30046065	SXE-32046065					
	85	SXE-30046085	SXE-32046085					
	105	SXE-30046105	SXE-32046105					
	125	SXE-30046125	SXE-32046125					
	165	SXE-30046165	SXE-32046165					
56	55	SXE-30056055	SXE-32056055					
	75	SXE-30056075	SXE-32056075					
	95	SXE-30056095	SXE-32056095					
	115	SXE-30056115	SXE-32056115					
	135	SXE-30056135	SXE-32056135					
66	175	SXE-30056175	SXE-32056175					
	55	SXE-30066055	SXE-32066055					

**SXE**

Mat: 1.7131  
Nawęglany  
Carbonized

d	d <sub>1</sub>	d <sub>2</sub>	s	l <sub>1</sub>	l	L	NR KAT.	NR KAT.					
30/32	42	47	6	7	66	75	SXE-30060075	SXE-32066075					
						95	SXE-30066095	SXE-32066095					
						115	SXE-30066115	SXE-32066115					
						135	SXE-30066135	SXE-32066135					
						175	SXE-30066175	SXE-32066175					
					76	55	SXE-30076055	SXE-32076055					
						75	SXE-30076075	SXE-32076075					
						95	SXE-30076095	SXE-32076095					
						115	SXE-30076115	SXE-32076115					
						155	SXE-30076155	SXE-32076155					
					86	55	SXE-30086055	SXE-32086055					
						75	SXE-30086075	SXE-32086075					
						95	SXE-30086095	SXE-32086095					
						115	SXE-30086115	SXE-32086115					
						155	SXE-30086155	SXE-32086155					
					96	55	SXE-30096055	SXE-32096055					
						75	SXE-30096075	SXE-32096075					
						95	SXE-30096095	SXE-32096095					
						115	SXE-30096115	SXE-32096115					
						155	SXE-30096155	SXE-32096155					
					116	75	SXE-30116075	SXE-32116075					
						115	SXE-30116115	SXE-32116115					
						155	SXE-30116155	SXE-32116155					
					136	95	SXE-30136095	SXE-32136095					
						115	SXE-30136115	SXE-32136115					
						155	SXE-30136155	SXE-32136155					
					156	115	SXE-30156115	SXE-32156115					
						155	SXE-30156155	SXE-32156155					
					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
155	SXE-40056155	SXE-42056155											
195	SXE-40056195	SXE-42056195											
66	75	SXE-40066075	SXE-42066075										
	135	SXE-40066135	SXE-42066135										
76	75	SXE-40076075	SXE-42076075										
	115	SXE-40076115	SXE-42076115										
	175	SXE-40076175	SXE-42076175										
86	75	SXE-40086075	SXE-42086075										
	135	SXE-40086135	SXE-42086135										
96	75	SXE-40096075	SXE-42096075										
	115	SXE-40096115	SXE-42096115										
	155	SXE-40096155	SXE-42096155										
116	95	SXE-40116095	SXE-42116095										
	135	SXE-40116135	SXE-42116135										
	195	SXE-40116195	SXE-42116195										
136	95	SXE-40136095	SXE-42136095										
	135	SXE-40136135	SXE-42136135										
	215	SXE-40136215	SXE-42136215										

[illegible]

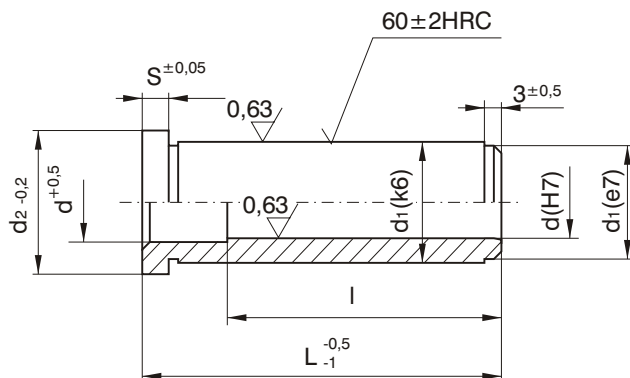
**TPE**


Mat: 1.7131

Nawęglana  
Carbonized

d	d <sub>1</sub>	d <sub>2</sub>	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
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
22/24	30	35	6	9	26	17	TPE-22017	TPE-24017
					31	22	TPE-22022	TPE-24022

d	d <sub>1</sub>	d <sub>2</sub>	s	f	l	L	NR KAT.	NR KAT.
22/24	30	35	6	9	36	27	TPE-22027	TPE-24027
					45	36	TPE-22036	TPE-24036
					55	46	TPE-22046	TPE-24046
					65	56	TPE-22056	TPE-24056
					75	66	TPE-22066	TPE-24066
					85	76	TPE-22076	TPE-24076
					95	86	TPE-22086	TPE-24086
					96	96	TPE-22096	TPE-24096
					96	116	TPE-22116	TPE-24116
					96	136	TPE-22136	TPE-24136
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
					116	116	TPE-30116	TPE-32116
					116	136	TPE-30136	TPE-32136
40/42	54	60	10	12	116	156	TPE-30156	TPE-32156
					116	196	TPE-30196	TPE-32196
					58	46	TPE-40046	TPE-42046
					68	56	TPE-40056	TPE-42056
					78	66	TPE-40066	TPE-42066
					88	76	TPE-40076	TPE-42076
					98	86	TPE-40086	TPE-42086
					108	96	TPE-40096	TPE-42096
					128	116	TPE-40116	TPE-42116
					136	136	TPE-40136	TPE-42136
					136	156	TPE-40156	TPE-42156
					136	196	TPE-40196	TPE-42196

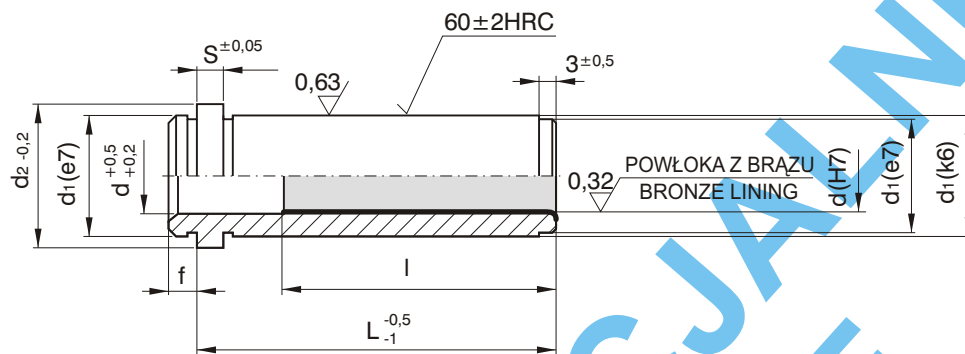
**TXE**


Mat: 1.7131

Nawęglana  
Carbonized

d	d <sub>1</sub>	d <sub>2</sub>	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
				36	36	TXE-09036	TXE-10036
				46	46	TXE-09046	TXE-10046
				46	56	TXE-09056	TXE-10056
14/15	20	25	6	46	66	TXE-09066	TXE-10066
				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
18/20	26	31	6	56	86	TXE-14086	TXE-15086
				56	96	TXE-14096	TXE-15096
				17	17	TXE-18017	TXE-20017
				22	22	TXE-18022	TXE-20022
				27	27	TXE-18027	TXE-20027
				36	36	TXE-18036	TXE-20036
				46	46	TXE-18046	TXE-20046
				56	56	TXE-18056	TXE-20056
				66	66	TXE-18066	TXE-20066
				76	76	TXE-18076	TXE-20076
				76	86	TXE-18086	TXE-20086
				76	96	TXE-18096	TXE-20096
				76	116	TXE-18116	TXE-20116
22/24	30	35	6	17	17	TXE-22017	TXE-24017

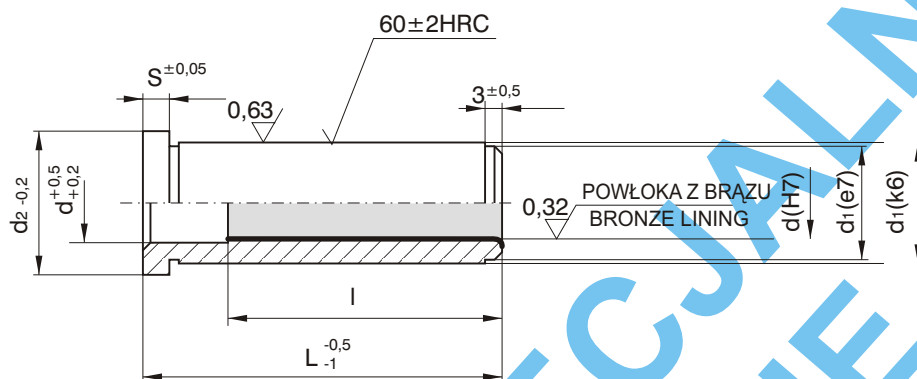
d	d <sub>1</sub>	d <sub>2</sub>	s	l	L	NR KAT.	NR KAT.
22/24	30	35	6	22	22	TXE-22022	TXE-24022
				27	27	TXE-22027	TXE-24027
				36	36	TXE-22036	TXE-24036
				46	46	TXE-22046	TXE-24046
				56	56	TXE-22056	TXE-24056
				66	66	TXE-22066	TXE-24066
				76	76	TXE-22076	TXE-24076
				86	86	TXE-22086	TXE-24086
				96	96	TXE-22096	TXE-24096
				96	116	TXE-22116	TXE-24116
30/32	42	47	6	96	136	TXE-22136	TXE-24136
				27	27	TXE-30027	TXE-32027
				36	36	TXE-30036	TXE-32036
				46	46	TXE-30046	TXE-32046
				56	56	TXE-30056	TXE-32056
				66	66	TXE-30066	TXE-32066
				76	76	TXE-30076	TXE-32076
				86	86	TXE-30086	TXE-32086
				96	96	TXE-30096	TXE-32096
				116	116	TXE-30116	TXE-32116
40/42	54	60	10	116	136	TXE-30136	TXE-32136
				116	156	TXE-30156	TXE-32156
				46	46	TXE-40046	TXE-42046
				56	56	TXE-40056	TXE-42056
				66	66	TXE-40066	TXE-42066
				76	76	TXE-40076	TXE-42076
				86	86	TXE-40086	TXE-42086
				96	96	TXE-40096	TXE-42096
				116	116	TXE-40116	TXE-42116
				136	136	TXE-40136	TXE-42136
				136	156	TXE-40156	TXE-42156
				136	196	TXE-40196	TXE-42196

**TPB**


\* - wykonanie całe z brązu  
- solid bronze only

d	d <sub>1</sub>	d <sub>2</sub>	s	f	l	L	NR KAT.	NR KAT.	d	d <sub>1</sub>	d <sub>2</sub>	s	f	l	L	NR KAT.	NR KAT.
9/10*	14	16	3	3	15	12	TPB-09012	TPB-10012	22/24	30	35	6	9	36	27	TPB-22027	TPB-24027
					20	17	TPB-09017	TPB-10017						45	36	TPB-22036	TPB-24036
					25	22	TPB-09022	TPB-10022						55	46	TPB-22046	TPB-24046
					30	27	TPB-09027	TPB-10027						65	56	TPB-22056	TPB-24056
					39	36	TPB-09036	TPB-10036						75	66	TPB-22066	TPB-24066
					46	46	TPB-09046	TPB-10046						85	76	TPB-22076	TPB-24076
					46	56	TPB-09056	TPB-10056						95	86	TPB-22086	TPB-24086
					46	66	TPB-09066	TPB-10066						96	96	TPB-22096	TPB-24096
14/15	20	25	6	9	26	17	TPB-14017	TPB-15017	30/32	42	47	6	9	96	116	TPB-22116	TPB-24116
					31	22	TPB-14022	TPB-15022						96	136	TPB-22136	TPB-24136
					36	27	TPB-14027	TPB-15027						96	156	TPB-22156	TPB-24156
					45	36	TPB-14036	TPB-15036						36	27	TPB-30027	TPB-32027
					55	46	TPB-14046	TPB-15046						45	36	TPB-30036	TPB-32036
					56	56	TPB-14056	TPB-15056						55	46	TPB-30046	TPB-32046
					56	66	TPB-14066	TPB-15066						65	56	TPB-30056	TPB-32056
					56	76	TPB-14076	TPB-15076						75	66	TPB-30066	TPB-32066
18/20	26	31	6	9	56	86	TPB-14086	TPB-15086	40/42	54	60	10	12	85	76	TPB-30076	TPB-32076
					56	96	TPB-14096	TPB-15096						95	86	TPB-30086	TPB-32086
					56	116	TPB-14116	TPB-15116						105	96	TPB-30096	TPB-32096
					26	17	TPB-18017	TPB-20017						116	116	TPB-30116	TPB-32116
					31	22	TPB-18022	TPB-20022						116	136	TPB-30136	TPB-32136
					36	27	TPB-18027	TPB-20027						116	156	TPB-30156	TPB-32156
					45	36	TPB-18036	TPB-20036						116	196	TPB-30196	TPB-32196
					55	46	TPB-18046	TPB-20046						58	46	TPB-40046	TPB-42046
22/24	30	35	6	9	65	56	TPB-18056	TPB-20056	40/42	54	60	10	12	68	56	TPB-40056	TPB-42056
					75	66	TPB-18066	TPB-20066						78	66	TPB-40066	TPB-42066
					76	76	TPB-18076	TPB-20076						88	76	TPB-40076	TPB-42076
					76	86	TPB-18086	TPB-20086						98	86	TPB-40086	TPB-42086
					76	96	TPB-18096	TPB-20096						108	96	TPB-40096	TPB-42096
					76	116	TPB-18116	TPB-20116						128	116	TPB-40116	TPB-42116
					76	136	TPB-18136	TPB-20136						136	136	TPB-40136	TPB-42136
					26	17	TPB-22017	TPB-24017						136	156	TPB-40156	TPB-42156
22/24	30	35	6	9	31	22	TPB-22022	TPB-24022						136	196	TPB-40196	TPB-42196

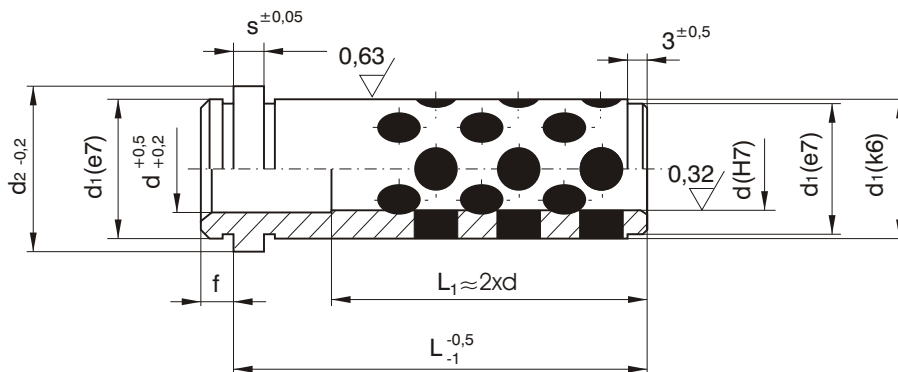



**TXB**


\* - wykonanie całe z brązu  
 - solid bronze only

d	d <sub>1</sub>	d <sub>2</sub>	s	I	L	NR KAT.	NR KAT.	d	d <sub>1</sub>	d <sub>2</sub>	s	I	L	NR KAT.	NR KAT.
9/10*	14	16	3	12	12	TXB-09012	TXB-10012	22/24	30	35	6	27	27	TXB-22027	TXB-24027
				17	17	TXB-09017	TXB-10017					36	36	TXB-22036	TXB-24036
				22	22	TXB-09022	TXB-10022					46	46	TXB-22046	TXB-24046
				27	27	TXB-09027	TXB-10027					56	56	TXB-22056	TXB-24056
				36	36	TXB-09036	TXB-10036					66	66	TXB-22066	TXB-24066
				46	46	TXB-09046	TXB-10046					76	76	TXB-22076	TXB-24076
				46	56	TXB-09056	TXB-10056					86	86	TXB-22086	TXB-24086
14/15	20	25	6	46	66	TXB-09066	TXB-10066					96	96	TXB-22096	TXB-24096
				17	17	TXB-14017	TXB-15017					96	116	TXB-22116	TXB-24116
				22	22	TXB-14022	TXB-15022					96	136	TXB-22136	TXB-24136
				27	27	TXB-14027	TXB-15027	30/32	42	47	6	27	27	TXB-30027	TXB-32027
				36	36	TXB-14036	TXB-15036					36	36	TXB-30036	TXB-32036
				46	46	TXB-14046	TXB-15046					46	46	TXB-30046	TXB-32046
				56	56	TXB-14056	TXB-15056					56	56	TXB-30056	TXB-32056
				56	66	TXB-14066	TXB-15066					66	66	TXB-30066	TXB-32066
				56	76	TXB-14076	TXB-15076					76	76	TXB-30076	TXB-32076
				56	86	TXB-14086	TXB-15086					86	86	TXB-30086	TXB-32086
18/20	26	31	6	56	96	TXB-10096	TXB-15096					96	96	TXB-30096	TXB-32096
				17	17	TXB-18017	TXB-20017					116	116	TXB-30116	TXB-32116
				22	22	TXB-18022	TXB-20022					116	136	TXB-30136	TXB-32136
				27	27	TXB-18027	TXB-20027					116	156	TXB-30156	TXB-32156
				36	36	TXB-18036	TXB-20036	40/42	54	60	10	46	46	TXB-40046	TXB-42046
				46	46	TXB-18046	TXB-20046					56	56	TXB-40056	TXB-42056
				56	56	TXB-18056	TXB-20056					76	76	TXB-40066	TXB-42066
22/24	30	35	6	66	66	TXB-18066	TXB-20066					66	76	TXB-40076	TXB-42076
				76	76	TXB-18076	TXB-20076					86	86	TXB-40086	TXB-42086
				76	86	TXB-18086	TXB-20086					96	96	TXB-40096	TXB-42096
				76	96	TXB-18096	TXB-20096					116	116	TXB-40116	TXB-42116
				76	116	TXB-18116	TXB-20116					136	136	TXB-40136	TXB-42136
				22	22	TXB-22022	TXB-24022					136	156	TXB-40156	TXB-42156
				22	22	TXB-22022	TXB-24022					136	196	TXB-40196	TXB-42196

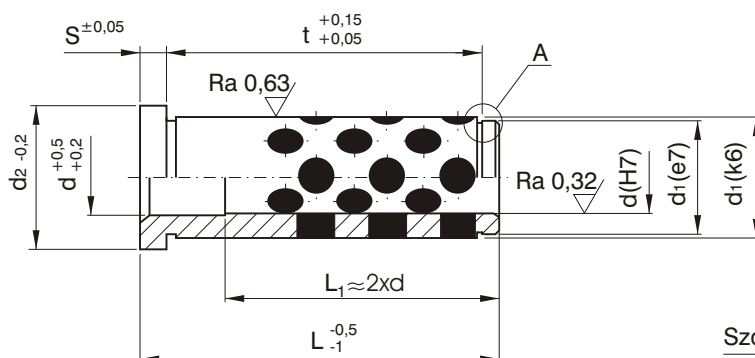




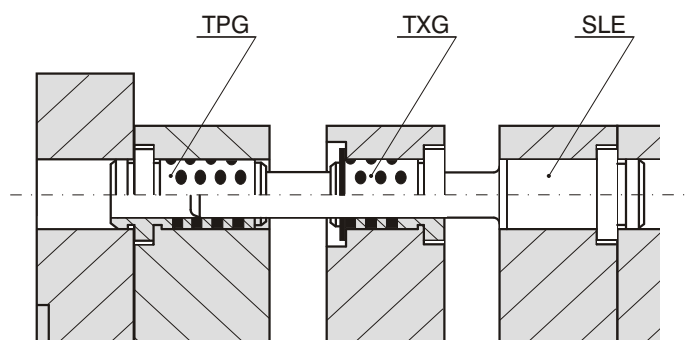
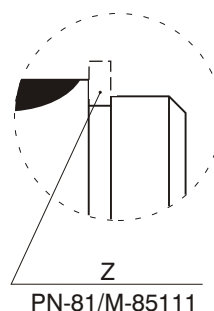
Mat: Brąz alumiiniowy  
Aluminium bronze

d	d <sub>1</sub>	d <sub>2</sub>	s	f	L	NR KAT.	NR KAT.
9/10	14	16	3	3	12	TPG-09012	TPG-10012
					17	TPG-09017	TPG-10017
					22	TPG-09022	TPG-10022
					27	TPG-09027	TPG-10027
					36	TPG-09036	TPG-10036
					46	TPG-09046	TPG-10046
					56	TPG-09056	TPG-10056
14/15	20	25	6	6	17	TPG-14017	TPG-15017
					22	TPG-14022	TPG-15022
					27	TPG-14027	TPG-15027
					36	TPG-14036	TPG-15036
					46	TPG-14046	TPG-15046
					56	TPG-14056	TPG-15056
					66	TPG-14066	TPG-15066
18/20	26	31	6	8	76	TPG-14076	TPG-15076
					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
22/24	30	35	6	8	66	TPG-18066	TPG-20066
					76	TPG-18076	TPG-20076
					22	TPG-22022	TPG-24022
					27	TPG-22027	TPG-24027
					36	TPG-22036	TPG-24036
					46	TPG-22046	TPG-24046

d	d <sub>1</sub>	d <sub>2</sub>	s	f	L	NR KAT.	NR KAT.
22/24	30	35	6	8	56	TPG-22056	TPG-24056
					66	TPG-22066	TPG-24066
					76	TPG-22076	TPG-24076
					86	TPG-22086	TPG-24086
					96	TPG-22096	TPG-24096
					116	TPG-22116	TPG-24116
30/32	42	47	6	8	27	TPG-30027	TPG-32027
					36	TPG-30036	TPG-32036
					46	TPG-30046	TPG-32046
					56	TPG-30056	TPG-32056
					66	TPG-30066	TPG-32066
					76	TPG-30076	TPG-32076
					86	TPG-30086	TPG-32086
40/42	54	60	10	12	96	TPG-30096	TPG-32096
					116	TPG-30116	TPG-32116
					136	TPG-30136	TPG-32136
					46	TPG-40046	TPG-42046
					56	TPG-40056	TPG-42056
					66	TPG-40066	TPG-42066
					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


**TXG**

Szczegół "A"  
Detail "A"



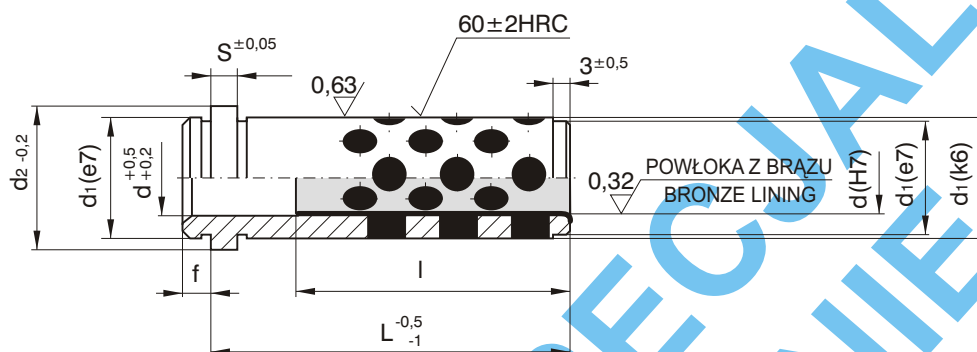
Mat: Brąz aluminiowy  
Aluminium Bronze

d	d <sub>1</sub>	d <sub>2</sub>	s	Z	t	L	NR KAT.	NR KAT.
9/10	14	16	3	Z14 / 14x1	6,6	12	TXG-09012	TXG-10012
					11,6	17	TXG-09017	TXG-10017
					16,6	22	TXG-09022	TXG-10022
					21,6	27	TXG-09027	TXG-10027
					30,6	36	TXG-09036	TXG-10036
					40,6	46	TXG-09046	TXG-10046
12	18	23	6	Z18 / 18x1,2	50,6	56	TXG-09056	TXG-10056
					8,3	17	TXG-12017	-----
					13,3	22	TXG-12022	-----
					18,3	27	TXG-12027	-----
					27,3	36	TXG-12036	-----
					37,3	46	TXG-12046	-----
14/15	20	25	6	Z20 / 20x1,2	47,3	56	TXG-12056	-----
					8,3	17	TXG-14017	TXG-15017
					13,3	22	TXG-14022	TXG-15022
					18,3	27	TXG-14027	TXG-15027
					27,3	36	TXG-14036	TXG-15036
					37,3	46	TXG-14046	TXG-15046
16	22	27	6	Z22 / 22x1,2	47,3	56	TXG-14056	TXG-15056
					13,3	22	TXG-16022	-----
					18,3	27	TXG-16027	-----
					27,3	36	TXG-16036	-----
					37,3	46	TXG-16046	-----
					47,3	56	TXG-16056	-----
18/20	26	31	6	Z26 / 26x1,2	8,3	17	TXG-18017	TXG-20017
					13,3	22	TXG-18022	TXG-20022
					18,3	27	TXG-18027	TXG-20027
					27,3	36	TXG-18036	TXG-20036
					37,3	46	TXG-18046	TXG-20046

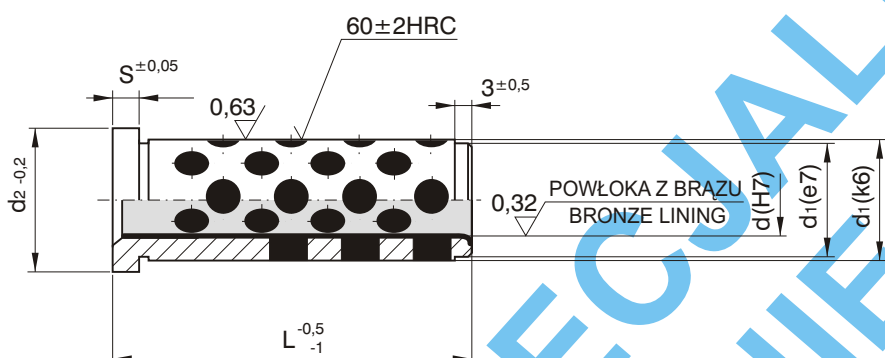
d	d <sub>1</sub>	d <sub>2</sub>	s	Z	t	L	NR KAT.	NR KAT.
18/20	26	31	6	Z26	47,3	56	TXG-18056	TXG-20056
					57,3	66	TXG-18066	TXG-20066
					67,3	76	TXG-18076	TXG-20076
					12,6	22	TXG-22022	TXG-24022
22/24	30	35	6	Z30 / 30x1,5	17,6	27	TXG-22027	TXG-24027
					26,6	36	TXG-22036	TXG-24036
					36,6	46	TXG-22046	TXG-24046
					46,6	56	TXG-22056	TXG-24056
					56,6	66	TXG-22066	TXG-24066
					66,6	76	TXG-22076	TXG-24076
					76,6	86	TXG-22086	TXG-24086
					86,6	96	TXG-22096	TXG-24096
30/32	42	47	6	Z42 / 42x1,75	15,9	27	TXG-30027	TXG-32027
					24,9	36	TXG-30036	TXG-32036
					34,9	46	TXG-30046	TXG-32046
					44,9	56	TXG-30056	TXG-32056
					54,9	66	TXG-30066	TXG-32066
					64,9	76	TXG-30076	TXG-32076
					74,9	86	TXG-30086	TXG-32086
					84,9	96	TXG-30096	TXG-32096
					104,9	116	TXG-30116	TXG-32116
					30,2	46	TXG-40046	TXG-42046
40/42	54	60	10	Z55 / 55x2,0	40,2	56	TXG-40056	TXG-42056
					50,2	66	TXG-40066	TXG-42066
					60,2	76	TXG-40076	TXG-42076
					70,2	86	TXG-40086	TXG-42086
					80,2	96	TXG-40096	TXG-42096
					100,2	116	TXG-40116	TXG-42116
					120,2	136	TXG-40136	TXG-42136



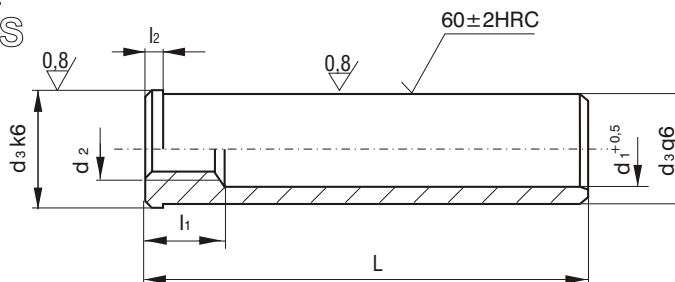
**TPS**



d	d1	d2	s	f	l	L	NR KAT.	NR KAT.	d	d1	d2	s	f	l	L	NR KAT.	NR KAT.
14/15	20	25	6	9	26	17	TPS-14017	TPS-15017	22/24	30	35	6	9	95	86	TPS-22086	TPS-24086
					31	22	TPS-14022	TPS-15022						96	96	TPS-22096	TPS-24096
					36	27	TPS-14027	TPS-15027						96	116	TPS-22116	TPS-24116
					45	36	TPS-14036	TPS-15036						36	27	TPS-30027	TPS-32027
					55	46	TPS-14046	TPS-15046						45	36	TPS-30036	TPS-32036
					56	56	TPS-14056	TPS-15056						55	46	TPS-30046	TPS-32046
					56	66	TPS-14066	TPS-15066						65	56	TPS-30056	TPS-32056
					56	76	TPS-14076	TPS-15076						75	66	TPS-30066	TPS-32066
18/20	26	31	6	9	26	17	TPS-18017	TPS-20017	30/32	42	47	6	9	85	76	TPS-30076	TPS-32076
					31	22	TPS-18022	TPS-20022						95	86	TPS-30086	TPS-32086
					36	27	TPS-18027	TPS-20027						105	96	TPS-30096	TPS-32096
					45	36	TPS-18036	TPS-20036						116	116	TPS-30116	TPS-32116
					55	46	TPS-18046	TPS-20046						116	136	TPS-30136	TPS-32136
					65	56	TPS-18056	TPS-20056						58	46	TPS-40046	TPS-42046
					75	66	TPS-18066	TPS-20066						68	56	TPS-40056	TPS-42056
					76	76	TPS-18076	TPS-20076						78	66	TPS-40066	TPS-42066
22/24	30	35	6	9	31	22	TPS-22022	TPS-24022	40/42	54	60	10	12	88	76	TPS-40076	TPS-42076
					36	27	TPS-22027	TPS-24027						98	86	TPS-40086	TPS-42086
					45	36	TPS-22036	TPS-24036						108	96	TPS-40096	TPS-42096
					55	46	TPS-22046	TPS-24046						128	116	TPS-40116	TPS-42116
					65	56	TPS-22056	TPS-24056						136	136	TPS-40136	TPS-42136
					75	66	TPS-22066	TPS-24066						136	156	TPS-40156	TPS-42156
					85	76	TPS-22076	TPS-24076						136	196	TPS-40196	TPS-42196


**TXS**


d	d1	d2	s	L	NR KAT.	NR KAT.	d	d1	d2	s	L	NR KAT.	NR KAT.
14/15	20	25	6	17	TXS-14017	TXS-15017	22/24	30	35	6	76	TXS-22076	TXS-24076
				22	TXS-14022	TXS-15022					86	TXS-22086	TXS-24086
				27	TXS-14027	TXS-15027					96	TXS-22096	TXS-24096
				36	TXS-14036	TXS-15036					27	TXS-30027	TXS-32027
				46	TXS-14046	TXS-15046					36	TXS-30036	TXS-32036
				56	TXS-14056	TXS-15056					46	TXS-30046	TXS-32046
18/20	26	31	6	17	TXS-18017	TXS-20017	30/32	42	47	6	56	TXS-30056	TXS-32056
				22	TXS-18022	TXS-20022					66	TXS-30066	TXS-32066
				27	TXS-18027	TXS-20027					76	TXS-30076	TXS-32076
				36	TXS-18036	TXS-20036					86	TXS-30086	TXS-32086
				46	TXS-18046	TXS-20046					96	TXS-30096	TXS-32096
				56	TXS-18056	TXS-20056					116	TXS-30116	TXS-32116
22/24	30	35	6	66	TXS-18066	TXS-20066	40/42	54	60	10	46	TXS-40046	TXS-42046
				76	TXS-18076	TXS-20076					56	TXS-40056	TXS-42056
				22	TXS-22022	TXS-24022					66	TXS-40066	TXS-42066
				27	TXS-22027	TXS-24027					76	TXS-40076	TXS-42076
				36	TXS-22036	TXS-24036					86	TXS-40086	TXS-42086
				46	TXS-22046	TXS-24046					96	TXS-40096	TXS-42096
				56	TXS-22056	TXS-24056					116	TXS-40116	TXS-42116
				66	TXS-22066	TXS-24066					136	TXS-40136	TXS-42136

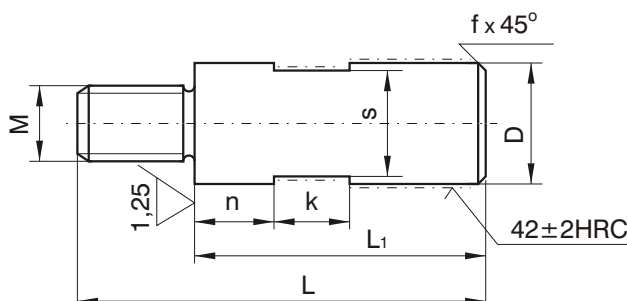
**TULEJA USTALAJĄCA**  
**LOCATING SLEEVES**

**TUE**

Mat: 1.7131

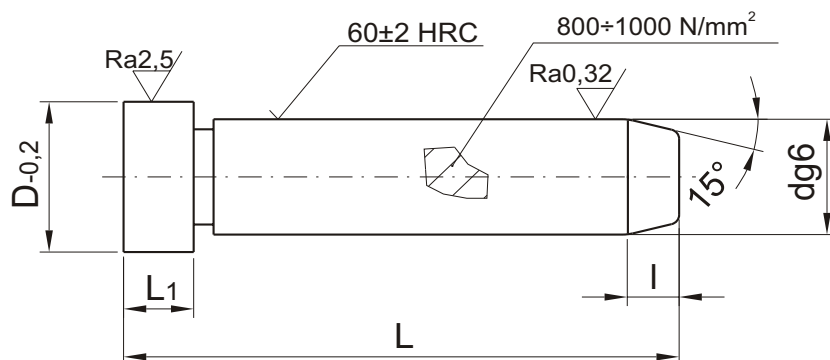
Nawęglana  
Carbonized

$l_1$	$l_2$	$d_1$	$d_2$	$d_3$	$L$	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	180	TUE -26180
					40	TUE -30040
					60	TUE -30060

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

**NÓŻKA**  
**FEET**

**NF**

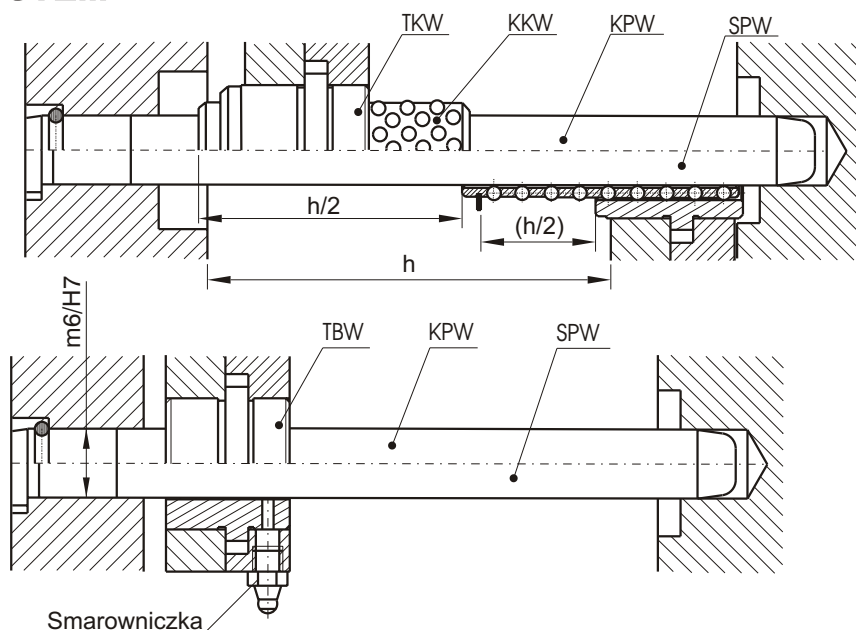
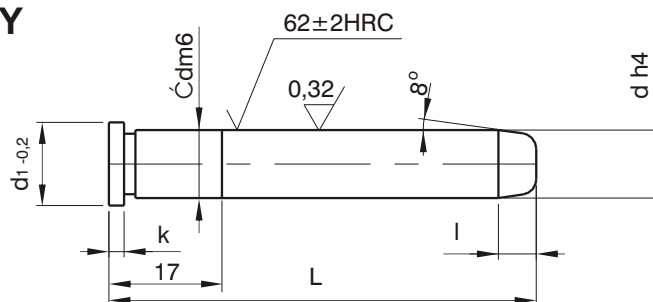
M	D	k	f	s	L	$L_1$	n	NR KAT.
10	16	12	1	13	56	40	5	NF-10056
					96	80	15	NF-10096
12	20	14	1,6	17	70	50	5	NF-12070
					120	100	15	NF-12120
16	25	16	1,6	22	88	63	15	NF-16088
20	32	18	2,5	27	112	80	15	NF-20112


**SS**

Mat: 1.7131  
Nawaęglany  
Carbonized

I	D	L <sub>1</sub>	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
7	22	8	18	60	SS-18060
				80	SS-18080
				100	SS-18100
				120	SS-18120
				140	SS-18140
				160	SS-18160
7	24	8	20	180	SS-18180
				200	SS-18200
				240	SS-18240
				60	SS-20060
				80	SS-20080
				100	SS-20100
7	24	8	20	120	SS-20120

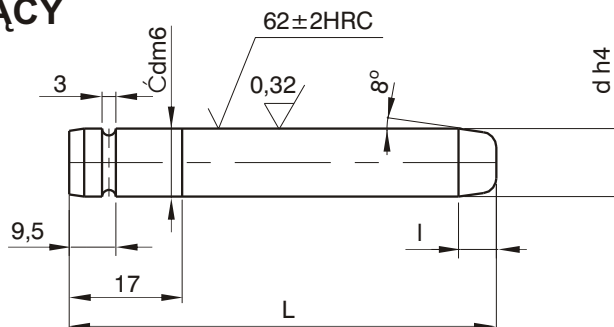
I	D	L <sub>1</sub>	d	L	NR KAT.
7	24	8	20	140	SS-20140
				160	SS-20160
				180	SS-20180
				200	SS-20200
				240	SS-20240
7	26	15	22	80	SS-22080
				100	SS-22100
				120	SS-22120
				140	SS-22140
				160	SS-22160
				180	SS-22180
				200	SS-22200
7	28	15	24	220	SS-22220
				240	SS-22240
				300	SS-22300
				80	SS-24080
				100	SS-24100
				120	SS-24120
				140	SS-24140
7	36	15	30	160	SS-24160
				180	SS-24180
				200	SS-24200
				220	SS-24220
				240	SS-24240
				300	SS-24300
7	36	15	32	100	SS-30100
				120	SS-30120
				160	SS-30160
				200	SS-30200
				240	SS-30240
				300	SS-30300
				360	SS-30360
10	48	15	40	100	SS-32100
				120	SS-32120
				160	SS-32160
				200	SS-32200
				240	SS-32240
				300	SS-32300
15	58	15	50	360	SS-32360
				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
15	58	15	50	360	SS-50360

**PROWADZENIE PŁYTY WYPYCHACZY**
**EJECTION SYSTEM**

**SŁUP PROWADZĄCY**
**LEADER PINS**

**SPW**

Mat: 1.7131  
Nawęglany  
Carbonized

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

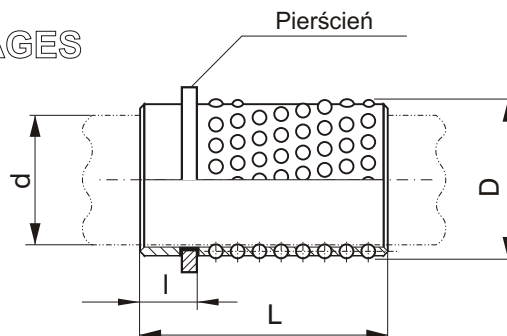
SPW-30240

**KOLEK PROWADZĄCY**
**LEADER PINS**

**KPW**

Mat: 1.7131  
Nawęglany  
Carbonized

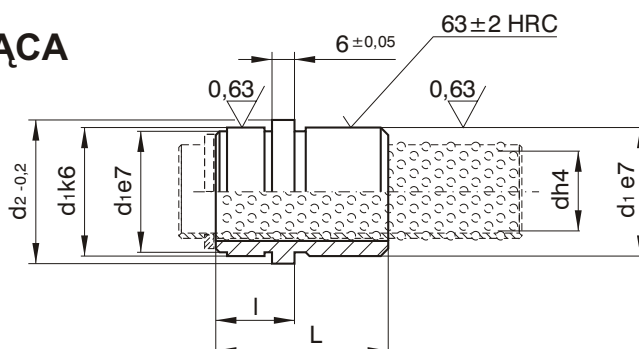
d	l	NR KATALOGOWY					
		L=100	L=125	L=160	L=200	L=240	L=300
12	4	KPW-12100	KPW-12125	KPW-12160			
18	7		KPW-18125	KPW-18160	KPW-18200		
30	7				KPW-30200	KPW-30240	KPW-30300



**KOSZYK KULKOWY**  
**BALL BEARINGS CAGES**

**KKW**

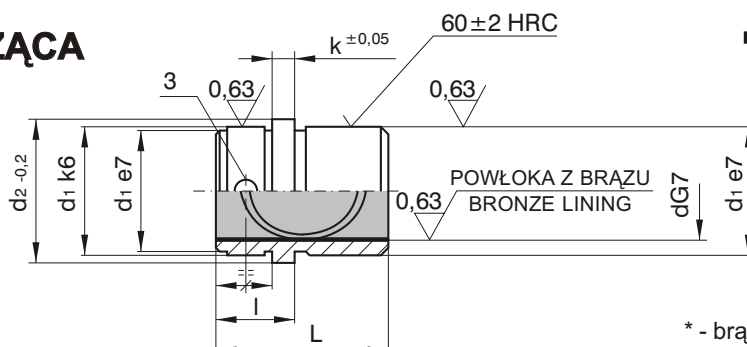
Mat: Aluminium

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

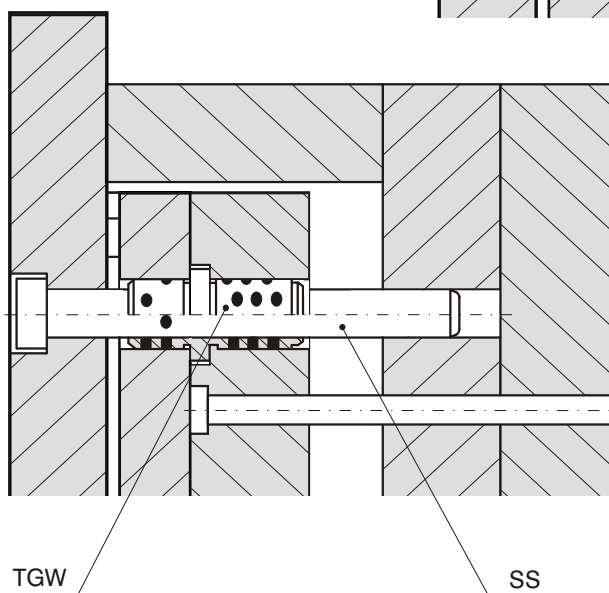
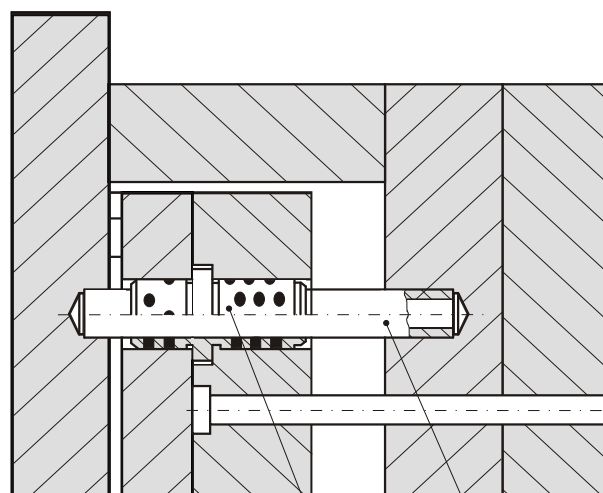
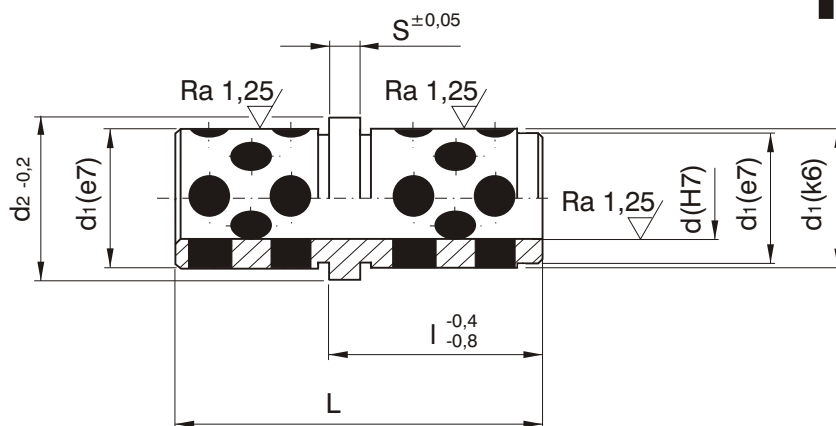
**TULEJA PROWADZĄCA**  
**GUIDE BUSHINGS**  
**BRONZE RITE™**

**TBW**

\* - brąz aluminiumowy  
- aluminium bronze

d	d1	d2	K	NR KATALOGOWY				
				I=9 L=21	I=12 L=29	I=17 L=39	I=22 L=49	I=27 L=63
12	16	19	3	TBW-1209*	TBW-1212*			
18	25	29	6		TBW-1812	TBW-1817	TBW-1822	
30	42	46	6			TBW-3017	TBW-3022	TBW-3027



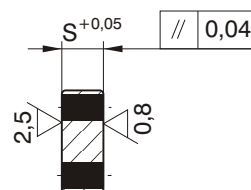
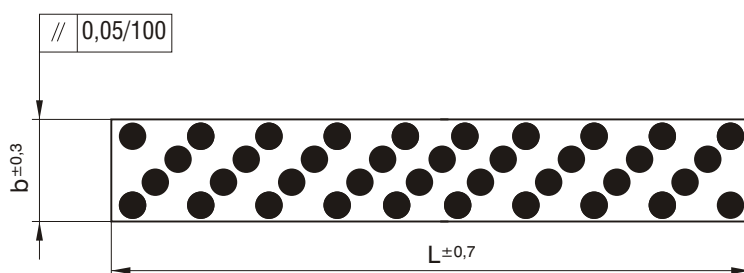
**TGW**



Mat: Brąz aluminiowy  
Aluminium Bronze

d	d <sub>1</sub>	d <sub>2</sub>	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

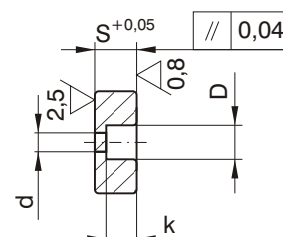
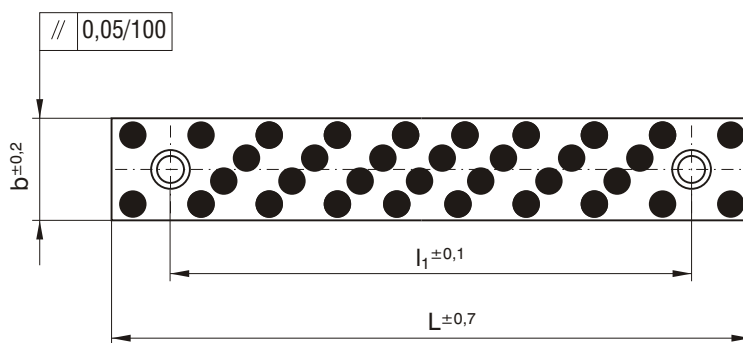
# PFA



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

Mat: Brąz aluminiumowy  
Aluminium bronze

# PFB

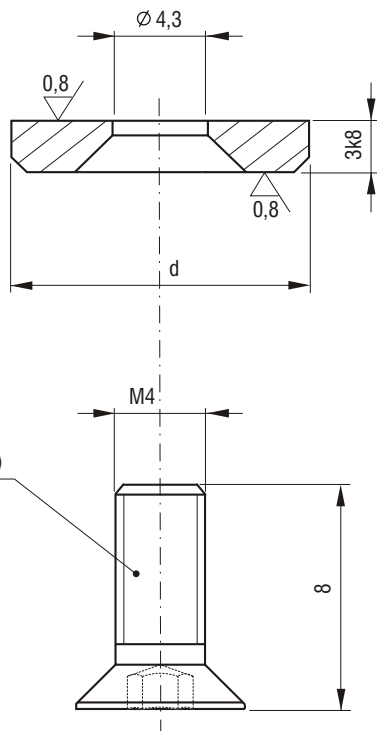


Mat: Brąz aluminiumowy  
Aluminium bronze

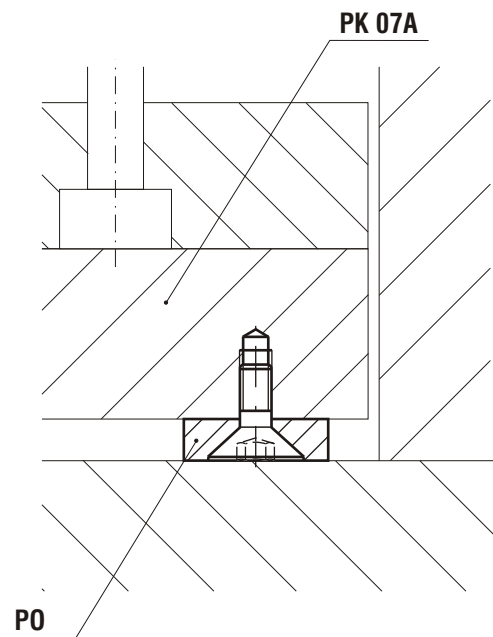
s	b	k	d	D	L			
					50	75	100	150
					l <sub>1</sub>			
					30	45	50	100
					NR KAT.			
8	20	5.7	5.5	9.5	PFB-2008050	PFB-2008075	————	————
10	20	6.8	6.6	11	————	PFB-2010075	PFB-2010100	————
	30				————	PFB-3010075	PFB-3010100	————
12	40	9	9	14	————	PFB-4012075	PFB-4012100	PFB-4012150
	50				————	PFB-5012075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



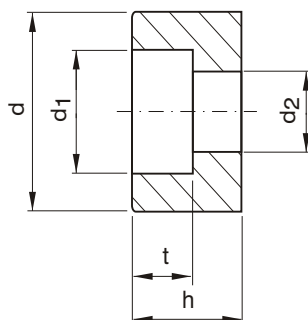
DIN 7991  
8.8 (800N/mm<sup>2</sup>)



**PO**



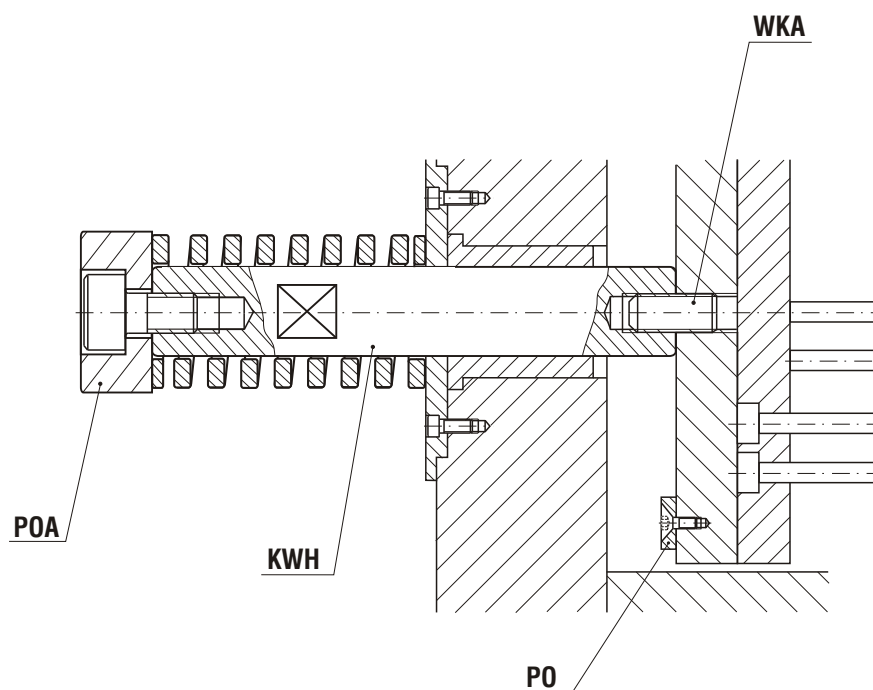
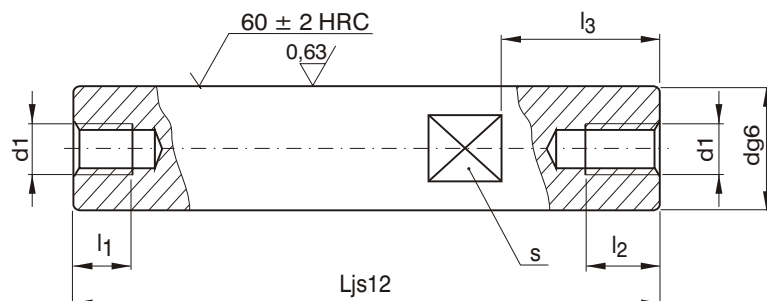
NR KAT.	d	DIN 7991
PO -1803	18	M4x8
PO -2803	28	



**POA**

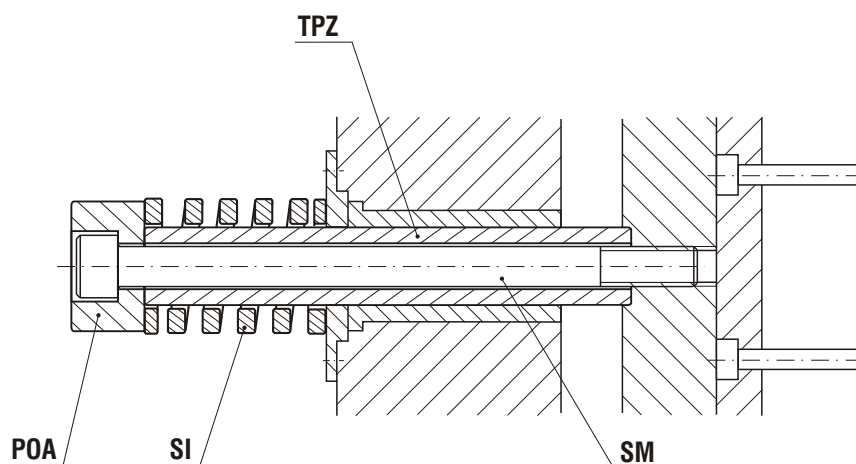
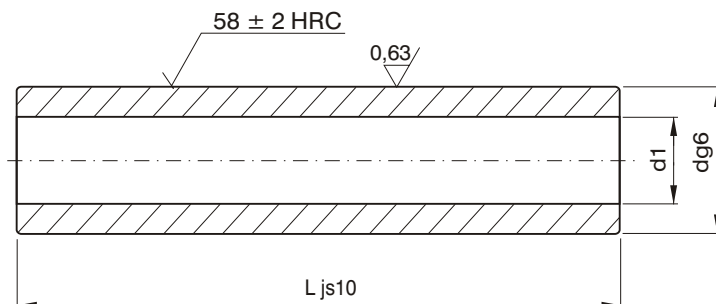
d	d1	d2	t	h	NR KAT.
15	11	6,6	8,4	10	POA-1510
22	14,5	9	11	14	POA-2214
36	17,5	11	13,5	20	POA-3620
46	20	14	15,5	25	POA-4625
56	26	18	21	32	POA-5632

30 ± 2 HRC

**KWH**

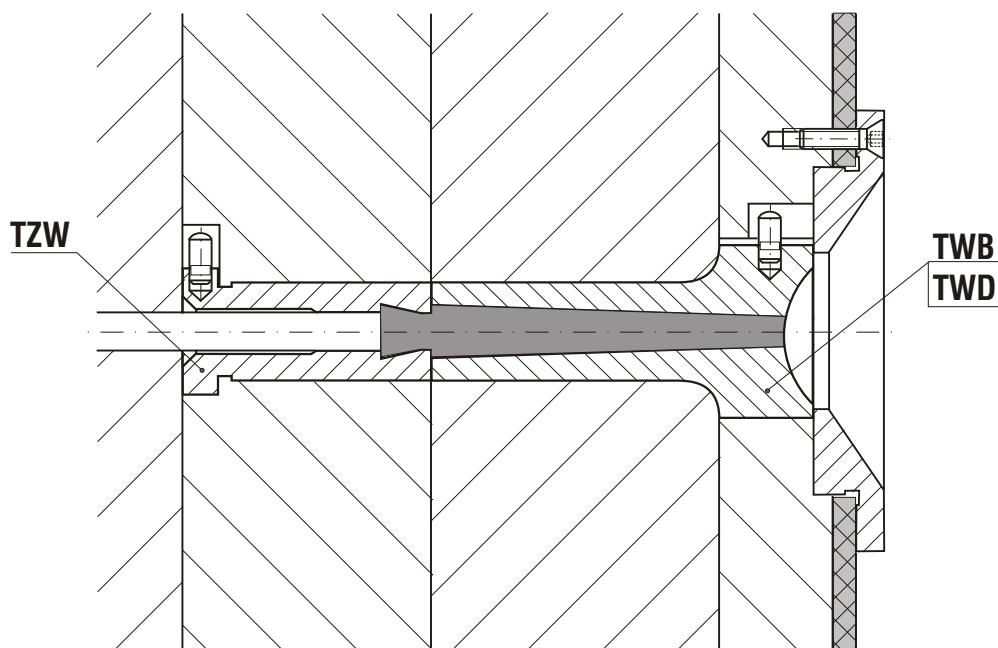
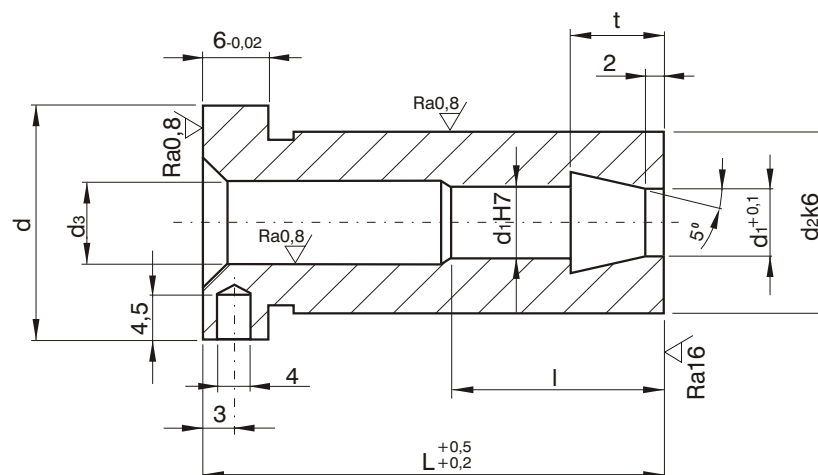
<b>d</b>	<b>d<sub>1</sub></b>	<b>s</b>	<b>l<sub>1</sub></b>	<b>l<sub>2</sub></b>	<b>l<sub>3</sub></b>	<b>L</b>	<b>NR KAT.</b>
<b>10</b>	<b>M6</b>	<b>9</b>	<b>9</b>	<b>16</b>	<b>20</b>	<b>60</b>	KWH-10060
						<b>70</b>	KWH-10070
						<b>80</b>	KWH-10080
						<b>100</b>	KWH-10100
						<b>120</b>	KWH-10120
						<b>140</b>	KWH-10140
<b>14</b>	<b>M8</b>	<b>12</b>	<b>11</b>	<b>16</b>	<b>25</b>	<b>60</b>	KWH-14060
						<b>70</b>	KWH-14070
						<b>80</b>	KWH-14080
						<b>100</b>	KWH-14100
						<b>120</b>	KWH-14120
						<b>140</b>	KWH-14140
						<b>160</b>	KWH-14160
						<b>180</b>	KWH-14180
<b>18</b>	<b>M10</b>	<b>14</b>	<b>12</b>	<b>20</b>	<b>45</b>	<b>100</b>	KWH-18100
						<b>120</b>	KWH-18120
						<b>140</b>	KWH-18140
						<b>160</b>	KWH-18160
						<b>180</b>	KWH-18180
						<b>200</b>	KWH-18200

<b>d</b>	<b>d<sub>1</sub></b>	<b>s</b>	<b>l<sub>1</sub></b>	<b>l<sub>2</sub></b>	<b>l<sub>3</sub></b>	<b>L</b>	<b>NR KAT.</b>
<b>18</b>	<b>M10</b>	<b>14</b>	<b>12</b>	<b>20</b>	<b>45</b>	<b>220</b>	KWH-18220
						<b>240</b>	KWH-18240
<b>20</b>	<b>M12</b>	<b>16</b>	<b>14</b>	<b>25</b>	<b>45</b>	<b>100</b>	KWH-20100
						<b>120</b>	KWH-20120
						<b>140</b>	KWH-20140
						<b>160</b>	KWH-20160
						<b>180</b>	KWH-20180
						<b>220</b>	KWH-20220
<b>24</b>	<b>M12</b>	<b>19</b>	<b>14</b>	<b>25</b>	<b>50</b>	<b>240</b>	KWH-20240
						<b>120</b>	KWH-24120
						<b>140</b>	KWH-24140
						<b>160</b>	KWH-24160
						<b>180</b>	KWH-24180
						<b>200</b>	KWH-24200
<b>30</b>	<b>M16</b>	<b>24</b>	<b>16</b>	<b>30</b>	<b>56</b>	<b>240</b>	KWH-24240
						<b>180</b>	KWH-30180
						<b>220</b>	KWH-30220
						<b>260</b>	KWH-30260
						<b>300</b>	KWH-30300

**TPZ**


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

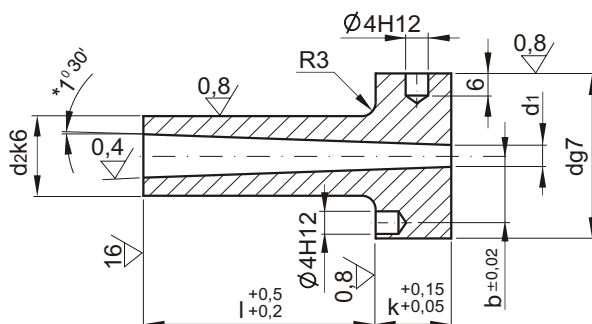
d	d <sub>1</sub>	L	NR KAT.
18	10,4	120	TPZ-18120
		140	TPZ-18140
		160	TPZ-18160
		180	TPZ-18180
		200	TPZ-18200
		220	TPZ-18220
		240	TPZ-18240
24	12,5	60	TPZ-24060
		80	TPZ-24080
		100	TPZ-24100
		120	TPZ-24120
		140	TPZ-24140
		160	TPZ-24160
		180	TPZ-24180
		200	TPZ-24200
30	16,5	240	TPZ-24240
	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

**TZW**

Mat: 1.2210  
56±2 HRC

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

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


**TWA**

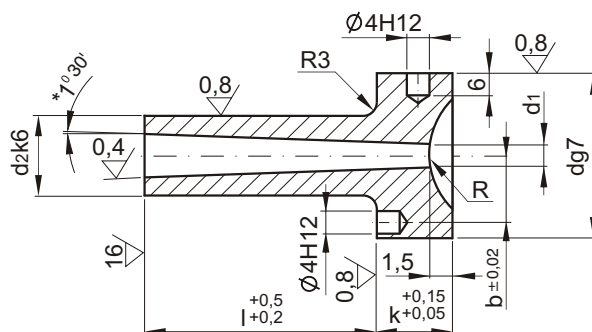
\* Na życzenie oferujemy tuleje  
z kątem 0,5°

\* Hole inclination 0,5° on request

Mat: 1.8159  
55±2 HRC

d <sub>2</sub>	d	k	b	d <sub>1</sub>	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
					56	TWA-184556

d <sub>2</sub>	d	k	b	d <sub>1</sub>	l	NR KAT.
18	38	18	15	4,5	56	TWA-184556
					76	TWA-184576
				4,5	46	TWA-244546
					56	TWA-244556
24	48	23	20	4,5	76	TWA-244576
					56	TWA-246556
				6,5	56	TWA-246556
					76	TWA-246576


**TWB**

\* Na życzenie oferujemy tuleje  
z kątem 0,5°

\* Hole inclination 0,5° on request

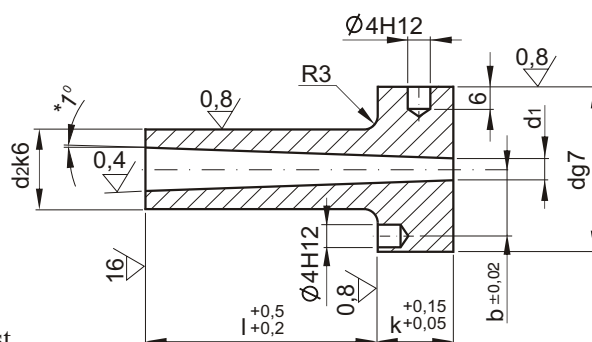
Mat: 1.8159  
55±2 HRC

R=15,5						
d <sub>2</sub>	d	k	b	d <sub>1</sub>	l	NR KAT.
18	38	18	15	3,5	27	TWB-183527-15,5
					36	TWB-183536-15,5
					46	TWB-183546-15,5
					56	TWB-183556-15,5
				4,5	27	TWB-184527-15,5
					36	TWB-184536-15,5
					46	TWB-184546-15,5
					56	TWB-184556-15,5
24	48	23	20	4,5	76	TWB-184576-15,5
					46	TWB-244546-15,5
					56	TWB-244556-15,5
					76	TWB-244576-15,5
				6,5	56	TWB-246556-15,5
					76	TWB-246576-15,5
					56	TWB-246556-15,5
					76	TWB-246576-15,5

R=40						
d <sub>2</sub>	d	k	b	d <sub>1</sub>	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
					56	TWB-244556-40
					76	TWB-244576-40
				6,5	56	TWB-246556-40
					76	TWB-246576-40
					56	TWB-246556-40
					76	TWB-246576-40



\* Na życzenie oferujemy tuleje z kątem  $0,5^{\circ}$   
\* Hole inclination  $0,5^{\circ}$  on request



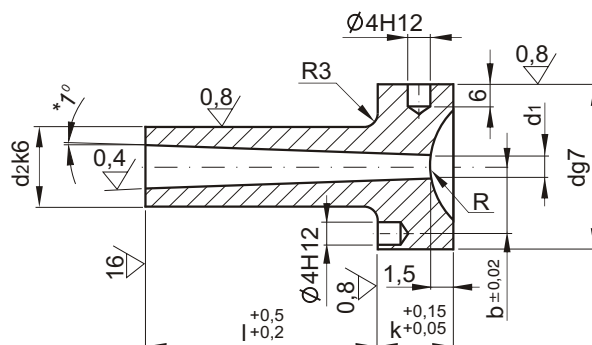
Mat: 1.8159  
55 ± 2 HRC

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
				3,5	22	TWC-123522
					27	TWC-123527
					36	TWC-123536
					46	TWC-123546
					56	TWC-123556
18	38	18	11	3	27	TWC-183027
					36	TWC-183036
					46	TWC-183046

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
				4	27	TWC-184027
					36	TWC-184036
					46	TWC-184046
					56	TWC-184056
					76	TWC-184076
					96	TWC-184096
					116	TWC-1840116



\* Na życzenie oferujemy tuleje z kątem  $0,5^\circ$   
\* Hole inclination  $0,5^\circ$  on request

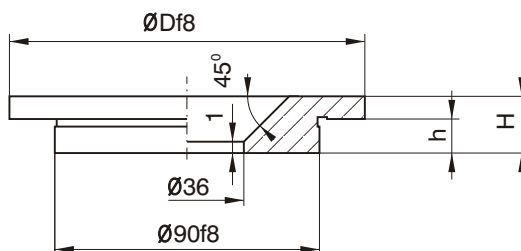


Mat: 1.8159  
55 ± 2 HRC

Node information 0,5 on request						R=15,5
d <sub>2</sub>	d	k	b	d <sub>1</sub>	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
				3,5	22	TWD-123522-15,5
					27	TWD-123527-15,5
					36	TWD-123536-15,5
					46	TWD-123546-15,5
18	38	18	15	3	56	TWD-123556-15,5
					27	TWD-183027-15,5
					36	TWD-183036-15,5
					46	TWD-183046-15,5
				4	56	TWD-183056-15,5
					76	TWD-183076-15,5
					96	TWD-183096-15,5
					116	TWD-1830116-15,5
				4	27	TWD-184027-15,5
					36	TWD-184036-15,5
					46	TWD-184046-15,5
					56	TWD-184056-15,5
					76	TWD-184076-15,5
					96	TWD-184096-15,5
					116	TWD-1840116-15,5

						R=40
d <sub>2</sub>	d	k	b	d <sub>1</sub>	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
				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
				4	116	TWD-1830116-40
					27	TWD-184027-40
					36	TWD-184036-40
					46	TWD-184046-40
					56	TWD-184056-40
					76	TWD-184076-40
					96	TWD-184096-40
					116	TWD-1840116-40



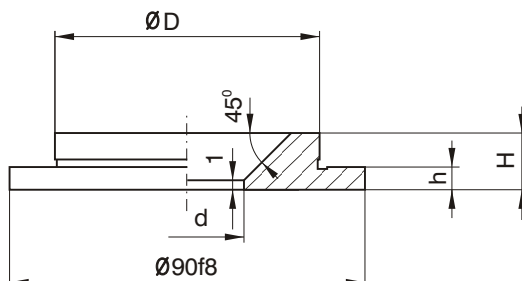

**PCA**

h	D	H	NR KAT.
4	100	8	PCA-100080
7		11	PCA-100110
9		13	PCA-100130
11		15	PCA-100150
12.5	110	16.5	PCA-100165
4		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	125	15	PCA-120150
12.5		16.5	PCA-120165
4		8	PCA-125080
7		11	PCA-125110
4		12	PCA-125120
9		13	PCA-125130
11		15	PCA-125150

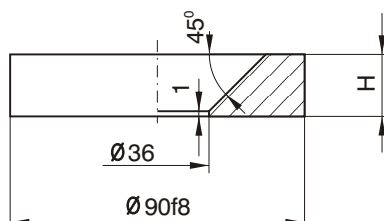
h	D	H	NR KAT.
12.5	125	16.5	PCA-125165
4		130	PCA-130120
		140	PCA-140120
		150	PCA-150120
	160	8	PCA-160080
7		11	PCA-160110
4		12	PCA-160120
9		13	PCA-160130
11		15	PCA-160150
12.5		16.5	PCA-160165
4	175	8	PCA-175080

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


**PCA**

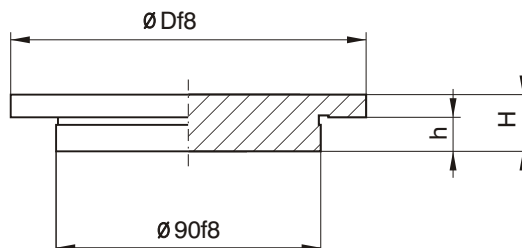
d	h	D	H	NR KAT.
36	4	60	8	PCA-060080
26	7		11	PCA-060110
	9		13	PCA-060130

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

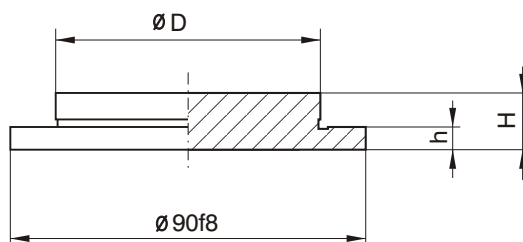

**PCB**


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

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

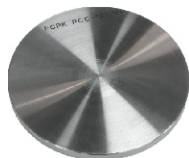
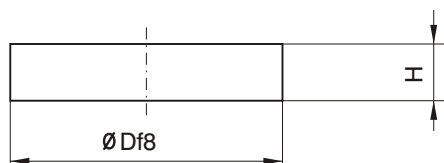
h	D	H	NR KAT.
9	<b>140</b>	<b>13</b>	PCB-140080
11		<b>15</b>	PCB-140110
12.5		<b>16.5</b>	PCB-140120
4		<b>8</b>	PCB-140130
7	<b>150</b>	<b>11</b>	PCB-150080
9		<b>13</b>	PCB-150110
11		<b>15</b>	PCB-150120
12.5		<b>16.5</b>	PCB-150130

h	D	H	NR KAT.
12.5	<b>160</b>	<b>16.5</b>	PCB-160080
4		<b>8</b>	PCB-160110
7		<b>11</b>	PCB-160120
9		<b>13</b>	PCB-160130
11	<b>175</b>	<b>15</b>	PCB-175080
12.5		<b>16.5</b>	PCB-175110
4		<b>8</b>	PCB-175120
7		<b>11</b>	PCB-175130
9	<b>200</b>	<b>12</b>	PCB-200080
11		<b>15</b>	PCB-200110
12.5		<b>16.5</b>	PCB-200120
4		<b>8</b>	PCB-200130
7	<b>250</b>	<b>11</b>	PCB-250080
9		<b>13</b>	PCB-250110
11		<b>15</b>	PCB-250120
12.5		<b>16.5</b>	PCB-250130


**PCB**


h	D	H	NR KAT.
4	<b>60</b>	<b>8</b>	PCB-060080
7		<b>11</b>	PCB-060110
9		<b>13</b>	PCB-060130

h	D	H	NR KAT.
4	<b>80</b>	<b>8</b>	PCB-080080
7		<b>11</b>	PCB-080110
9		<b>13</b>	PCB-080130


**PCC**


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

D	H	NR KAT.
<b>90</b>	<b>8</b>	PCC-090080
	<b>11</b>	PCC-090110
	<b>13</b>	PCC-090130
	<b>15</b>	PCC-090150
<b>100</b>	<b>16.5</b>	PCC-100080
	<b>8</b>	PCC-100110
	<b>11</b>	PCC-100120
	<b>13</b>	PCC-100130
<b>110</b>	<b>15</b>	PCC-110080
	<b>16.5</b>	PCC-110110

D	H	NR KAT.
<b>120</b>	<b>8</b>	PCC-120080
	<b>12</b>	PCC-120120
<b>125</b>	<b>8</b>	PCC-125080
	<b>12</b>	PCC-125120
	<b>15</b>	PCC-125150
<b>130</b>	<b>12</b>	PCC-130120
	<b>15</b>	PCC-130150
<b>140</b>	<b>8</b>	PCC-140080
	<b>12</b>	PCC-140120
<b>150</b>	<b>8</b>	PCC-150080
	<b>12</b>	PCC-150120

D	H	NR KAT.
<b>160</b>	<b>8</b>	PCC-160080
	<b>12</b>	PCC-160120
<b>175</b>	<b>8</b>	PCC-175080
	<b>12</b>	PCC-175120
<b>200</b>	<b>8</b>	PCC-200080
	<b>12</b>	PCC-200120
<b>250</b>	<b>8</b>	PCC-250080
	<b>12</b>	PCC-250120