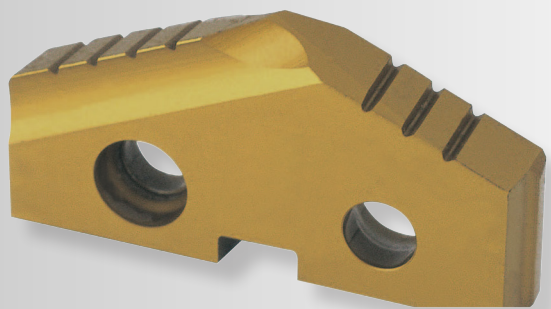
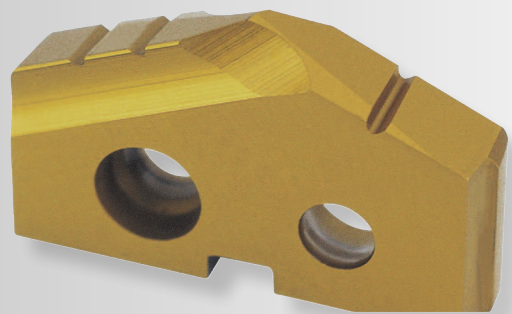


SPADE DRILLS

WIERTA ŁOPATKOWE

HSS-PM for general machines and large diameters higher productivity than other drilling tools.

Płytki wykonane z HSS-PM do obróbki ogólnej oraz dużych średnic, wykazujące się wyższą produktywnością niż inne narzędzia wiertarskie.



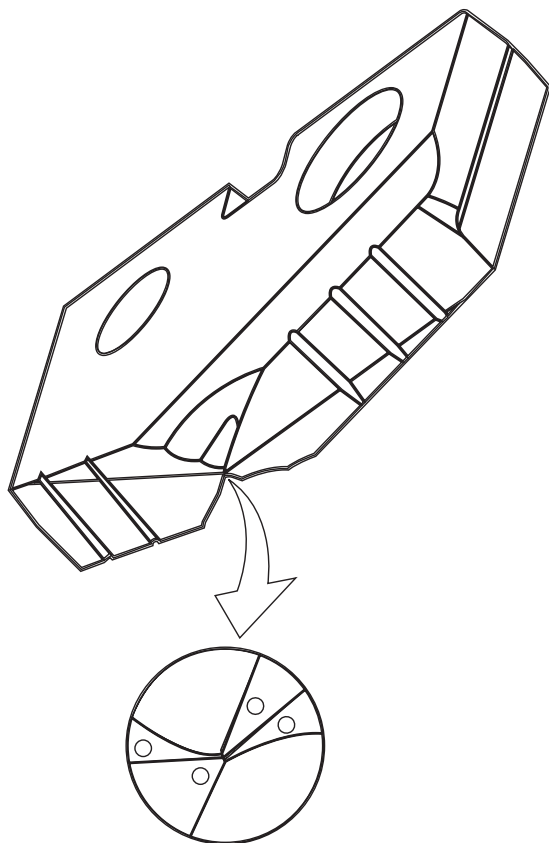
HRKS

HRK

INSERTS & HOLDERS
PŁYTKI & UCHWYTY

This new "Hybrid Point" combines the strength of the standard point with additional "Web Thinning". This new point increases stability, reduces thrust, improves centering and allows increased speeds and feeds.

Nowe "hybrydowe wierzchołki" łączą w sobie wytrzymałość standardowego wierzchołka z dodatkowym przewężeniem wierzchołka. Nowy typ wierzchołka poprawia stabilność, zmniejsza siły skrawania, poprawia centrowanie wiertła oraz pozwalana zwiększoną prędkość skrawania i posuw



Coating

- **All inserts receives special coatings**

Pokrycie

- Wszystkie płytki dostępne są ze specjalnymi pokryciami

Fix screw holes

- **Safe and reliable clamping**
- **Ensure the stability during drilling**

Otwory mocujące

- Bezpieczne oraz niezawodne mocowanie
- Zapewnia stabilność w trakcie wiercenia

Chip dividing groove

- **Reduce cutting width**
- **Better chip removal**
- **Reduce drilling torque**

Rowek do dzielenia wiórów

- Zmniejsza szerokość cięcia
- Ułatwia odprowadzanie wióra
- Zmniejsza moment skręcający wiercenia

Chip breaker

- **Chip breaking, better chip removal**

Łamacz wióra

- Łamanie wióra, lepsze odprowadzanie wióra

Diameter chamfer

- **Increase the strength of insert**
- **Reduce the wear & tear of outer diameter**
- **Improve the smoothness on the surface of workpiece**

Fazka średnicy

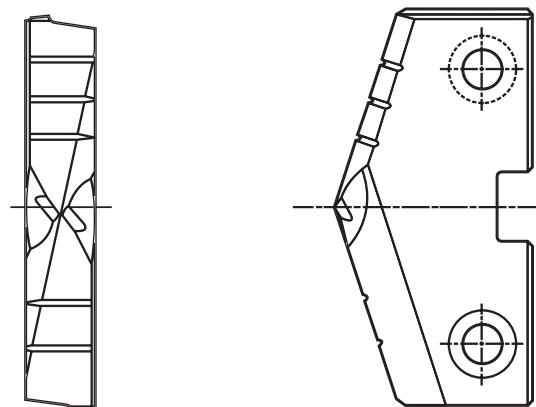
- Zwiększa wytrzymałość płytki
- Zmniejsza zużycie oraz wykruszenia średnicy zewnętrznej
- Poprawia gładkość powierzchni na przedmiocie obrabianym

Location groove

- **Ensure the accuracy of the radial direction**

Rowek ustalający

- Zapewnia dokładne ułożenie w kierunku osiowym



Spade drill is the perfect drilling tool match all kinds of traditional /manual drilling machines such as:

- **Pillar drilling machines**
- **Radial drilling machines**
- **Vertical driller**
- **Non numerically controlled lathe**

Wiertła łopatkowe idealnie nadają się do pracy na wszystkich typach maszyn konwencjonalnych/ręcznych, takich jak:

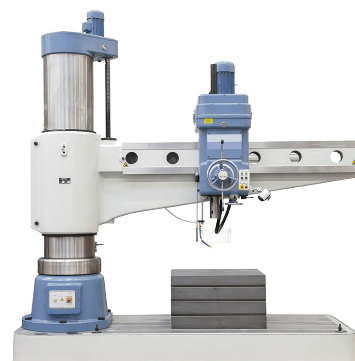
- Wiertarki kolumnowe
- Wiertarki osiowe
- Wiertarki poziome
- Tokarki bez sterowania CNC



Vertical driller
Wiertarka pozioma



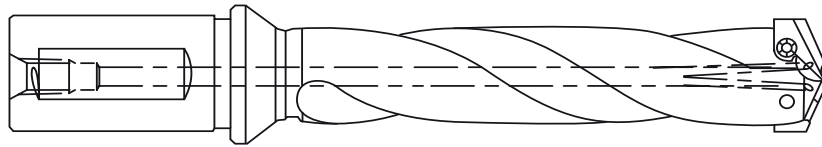
Pillar drilling machine
Wiertarka kolumnowa



Radial drilling machine
Wiertarka osiowa

DESCRIPTION OF HOLDER MODELS

OPIS MODELI UCHWYTÓW



**Shank DIN 1835-B
Weldon Type**

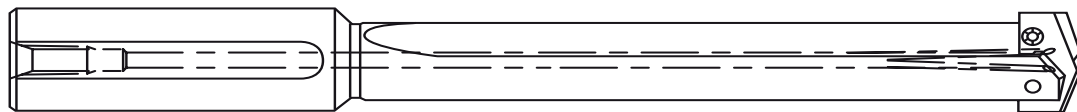
Helical flute

Drills rotate, work piece does not rotate. For example: vertical or radial drilling machines. The most commonly used holders are with helical flute.

Chwyt DIN 1835-B
Typ Weldon

Rowki skrętnie

Wiertło obraca się, przedmiot obrabiany nie obraca się. Przykład: pionowe lub osiowe wiertarki. Najczęściej stosowane są korpusy z rowkami skrętными.



**Shank DIN 1835-B
Weldon Type**

Straight flute

Drills does not rotate, work piece rotates. For example: lathe. For casting materials are the straight flute versions always better. It does not matter whether the drill or the work piece rotates.

Chwyt DIN 1835-B
Typ Weldon

Rowki proste

Wiertło nie obraca się, przedmiot obrabiany obraca się. Przykład: tokarka. Dla detali odlewanych, korpusy z prostymi rowkami zawsze sprawują się lepiej. Nie ma znaczenia czy przedmiot obrabiany czy korpus obraca się.



**ISO 296
Morse taper shank**

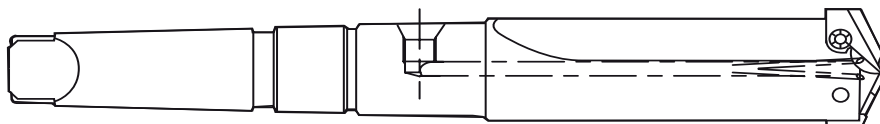
Helical flute

Drills rotate, work piece does not rotate. For example: vertical or radial drilling machines. The most commonly used holders are with helical flute.

Chwyt ISO 296
Stożek Morse'a

Rowki skrętnie

Wiertło obraca się, przedmiot obrabiany nie obraca się. Przykład: pionowe lub osiowe wiertarki. Najczęściej stosowane są korpusy z rowkami skrętными.



**ISO 296
Morse taper shank**

Straight flute

Drills does not rotate, work piece rotates. For example: lathe. For casting materials are the straight flute versions always better. It does not matter whether the drill or the work piece rotates.

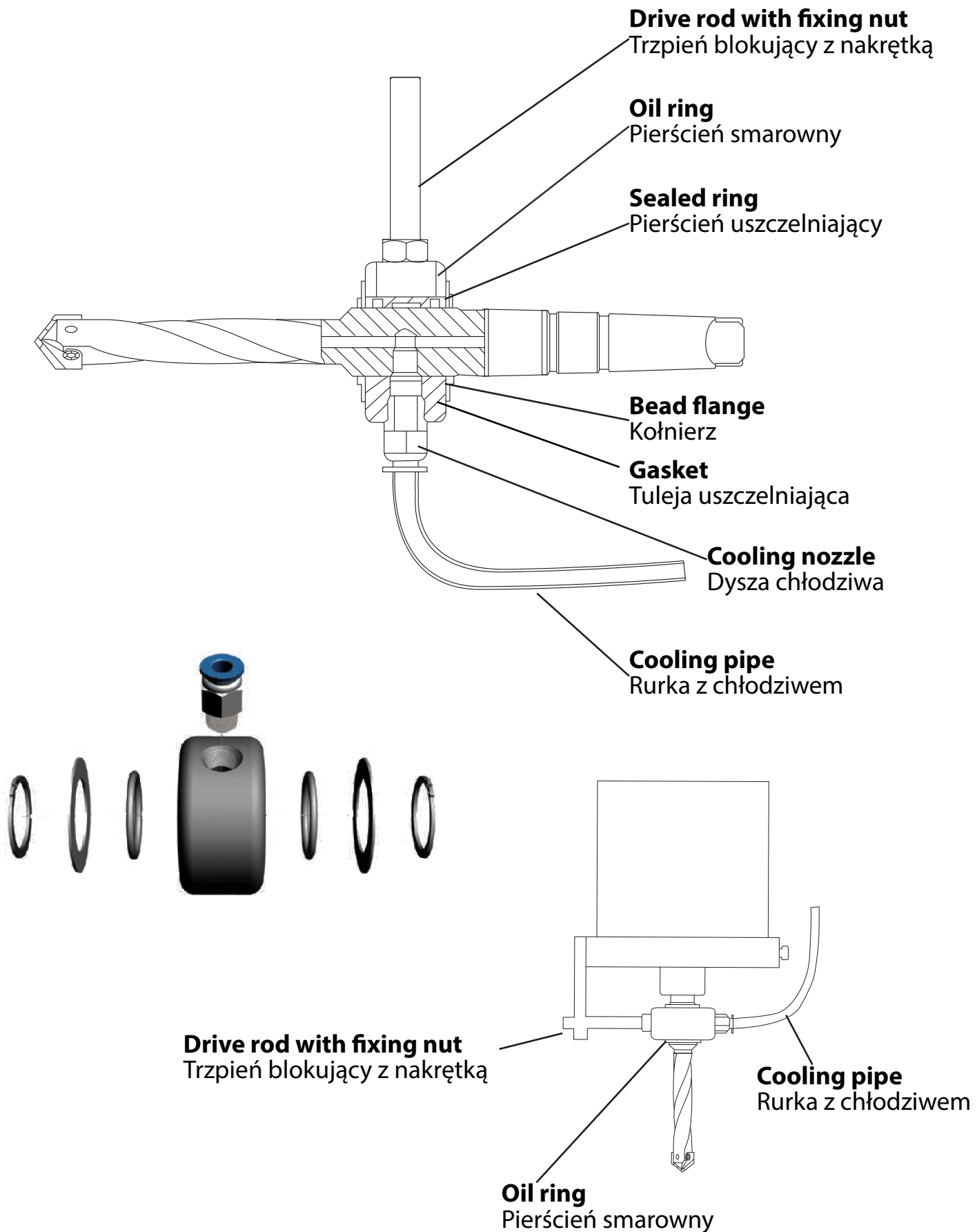
Chwyt ISO 296
Stożek Morse'a

Rowki proste

Wiertło nie obraca się, przedmiot obrabiany obraca się. Przykład: tokarka. Dla detali odlewanych, korpusy z prostymi rowkami zawsze sprawują się lepiej. Nie ma znaczenia czy przedmiot obrabiany czy korpus obraca się.

MONTAGE OIL RING ASSEMBLY AND ACCESSORIES

MONTAŻ PIERŚCIENIA SMAROWANEGO W ZŁOŻENIU



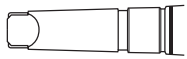
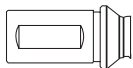
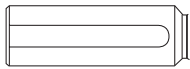
Spade drill inserts

Płytki łopatkowe

SERIES SERIE	MODEL	DESCRIPTION OPIS	SIZE	
			MIN	MAX
1-8		HRK SPADE DRILL INSERTS - HSS M4 PŁYTKI ŁOPATKOWE HRK - HSS M4	17.86	114.3
Y, Z, 0, 1-4		HRK SPADE DRILL INSERTS - SUPER HSS T15 PŁYTKI ŁOPATKOWE HRK- SUPER HSS T15	9.5	65.09
Y, Z, 0, 1, 2		HRK SPADE DRILL INSERTS - PREMIUM HSS M48 PŁYTKI ŁOPATKOWE HRK- PREMIUM HSS M48	9.5	35
1-3		HRKS SPADE DRILL INSERTS - HSS M4 PŁYTKI ŁOPATKOWE HRKS- HSS M4	17.86	47.63
Y, Z, 0, 1-3		HRKS SPADE DRILL INSERTS -SUPER HSS T15 PŁYTKI ŁOPATKOWE HRKS- SUPER HSS T15	9.5	47.63
Y, Z, 0, 1, 2		HRKS POINT SPADE DRILL INSERTS - PREMIUM HSS M48 PŁYTKI ŁOPATKOWE HRKS- PREMIUM HSS M48	9.5	35

Spade drill holders

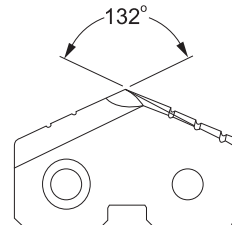
Uchwyty do płytek łopatkowych

TS		TAPER SHANK HOLDERS - INCH/METRIC CHWYTY MORSE'A - CALE/METRYCZNY
FS		FLANGED STRAIGHT SHANK HOLDERS - INCH/METRIC CHWYT WELDON - CALE/METRYCZNY
SS		STRAIGHT SHANK HOLDERS - INCH CHWYT CYLINDRYCZNY - CALE

HRK - SPADE DRILL INSERTS - HSS M4 PŁYTKI ŁOPATKOWE HRK- HSS M4

- For general use in steels and cast irons.
- Set up time can be reduced due to changing inserts easily on the machine.
- Any non-standard size available.

- Do obróbki ogólnej stali i żeliwa
- Możliwość skrócenia czasów przezbrojeń, płytki można wymieniać bezpośrednio na maszynie.
- Dostępny każdy niestandardowy wymiar.

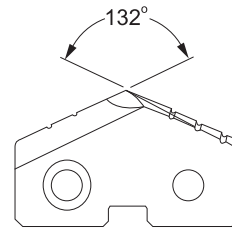


Series Seria	Diameter Średnica			Thick Grubość	EDP		
	Inch (inch) Calowy (cale)	Metric (mm) Metryczny (mm)	Decimal (inch) Dziesiętny (cale)		TiN	TiCN	TiAlN
1	45/64"	17.86	.731"	4. (5/32")	HRK1405045	HRK1410045	HRK1415045
		18.	.787"		HRK1455180	HRK1460180	HRK1465180
	23/32"	18.26	.7188"		HRK1405046	HRK1410046	HRK1415046
		18.5	.7283"		HRK1455185	HRK1460185	HRK1465185
	47/64"	18.65	.7344"		HRK1405047	HRK1410047	HRK1415047
		19.	.748"		HRK1455190	HRK1460190	HRK1465190
	3/4"	19.5	.75"		HRK1405048	HRK1410048	HRK1415048
	49/64"	19.45	.7656"		HRK1405049	HRK1410049	HRK1415049
		19.5	.7677"		HRK1455195	HRK1460195	HRK1465195
	25/32"	19.84	.7813"		HRK1405050	HRK1410050	HRK1415050
		2.	.7874"		HRK1455200	HRK1460200	HRK1465200
	51/64"	2.24	.7969"		HRK1405051	HRK1410051	HRK1415051
		2.5	.871"		HRK1455205	HRK1460205	HRK1465205
	13/16"	2.64	.8125"		HRK1405052	HRK1410052	HRK1415052
		21.	.8268"		HRK1455210	HRK1460210	HRK1465210
	27/32"	21.43	.8438"		HRK1405054	HRK1410054	HRK1415054
	55/64"	21.83	.8594"		HRK1405055	HRK1410055	HRK1415055
		22.	.8661"		HRK1455220	HRK1460220	HRK1465220
	7/8"	22.23	.875"		HRK1405056	HRK1410056	HRK1415056
	57/64"	22.62	.896"		HRK1405057	HRK1410057	HRK1415057
		23.	.955"		HRK1455230	HRK1460230	HRK1465230
	29/32"	23.2	.963"		HRK1405058	HRK1410058	HRK1415058
	59/64"	23.42	.9219"		HRK1405059	HRK1410059	HRK1415059
	15/16"	23.81	.9375"		HRK1405060	HRK1410060	HRK1415060
		24.	.9449"		HRK1455240	HRK1460240	HRK1465240

HRK - SPADE DRILL INSERTS - HSS M4 PŁYTKI ŁOPATKOWE HRK- HSS M4

- For general use in steels and cast irons.
- Set up time can be reduced due to changing inserts easily on the machine.
- Any non-standard size available.

- Do obróbki ogólnej stali i żeliwa
- Możliwość skrócenia czasów przezbrojeń, płytki można wymieniać bezpośrednio na maszynie.
- Dostępny każdy niestandardowy wymiar.

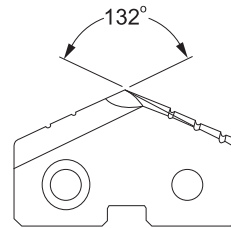


Series Seria	Diameter Średnica			Thick Grubość	EDP		
	Inch (inch) Calowy (cale)	Metric (mm) Metryczny (mm)	Decimal (inch) Dziesiętny (cale)		TiN	TiCN	TiAlN
2	31/32"	24.61	.9688"	4.8 (3/16")	HRK1405062	HRK1410062	HRK1415062
	63/64"	25.	.9843"		HRK1405063	HRK1410063	HRK1415063
	1"	25.4	1."		HRK1405100	HRK1410100	HRK1415100
	1-1/64"	25.8	1.156"		HRK1405101	HRK1410101	HRK1415101
		26.	1.236"		HRK1455260	HRK1460260	HRK1465260
	1-1/32"	26.19	1.313"		HRK1405102	HRK1410102	HRK1415102
	1-3/64"	26.59	1.469"		HRK1405103	HRK1410103	HRK1415103
	1-1/16"	26.99	1.625"		HRK1405104	HRK1410104	HRK1415104
		27.	1.63"		HRK1455270	HRK1460270	HRK1465270
	1-3/32"	27.78	1.938"		HRK1405106	HRK1410106	HRK1415106
		28.	1.124"		HRK1455280	HRK1460280	HRK1465280
	1-7/64"	28.18	1.194"		HRK1405107	HRK1410107	HRK1415107
	1-1/8"	28.58	1.125"		HRK1405108	HRK1410108	HRK1415108
		29.	1.1417"		HRK1455290	HRK1460290	HRK1465290
	1-5/32"	29.37	1.1563"		HRK1405110	HRK1410110	HRK1415110
		3.	1.1811"		HRK1455300	HRK1460300	HRK1465300
	1-3/16"	3.16	1.1875"		HRK1405112	HRK1410112	HRK1415112
	1-7/32"	3.96	1.2188"		HRK1405114	HRK1410114	HRK1415114
		31.	1.225"		HRK1455310	HRK1460310	HRK1465310
	1-1/4"	31.75	1.25"		HRK1405116	HRK1410116	HRK1415116
		32.	1.2598"		HRK1455320	HRK1460320	HRK1465320
	1-9/32"	32.54	1.2813"		HRK1405118	HRK1410118	HRK1415118
		33.	1.2992"		HRK1455330	HRK1460330	HRK1465330
	1-5/16"	33.34	1.3125"		HRK1405120	HRK1410120	HRK1415120
		34.	1.3386"		HRK1455340	HRK1460340	HRK1465340
	1-11/32"	34.13	1.3438"		HRK1405122	HRK1410122	HRK1415122
	1-3/8"	34.93	1.375"		HRK1405124	HRK1410124	HRK1415124
		35.	1.378"		HRK1455350	HRK1460350	HRK1465350

HRK - SPADE DRILL INSERTS - HSS M4 PŁYTKI ŁOPATKOWE HRK- HSS M4

- For general use in steels and cast irons.
- Set up time can be reduced due to changing inserts easily on the machine.
- Any non-standard size available.

- Do obróbki ogólnej stali i żeliwa
- Możliwość skrócenia czasów przezbrojeń, płytki można wymieniać bezpośrednio na maszynie.
- Dostępny każdy niestandardowy wymiar.

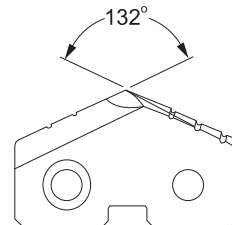


Series Seria	Diameter Średnica			Thick Grubość	EDP		
	Inch (inch) Calowy (cale)	Metric (mm) Metryczny (mm)	Decimal (inch) Dziesiętny (cale)		TiN	TiCN	TiAlN
3	1-13/32"	35.72	1.463"	6.4 (1/4")	HRK1405126	HRK1410126	HRK1415126
		36.	1.4173"		HRK1455360	HRK1460360	HRK1465360
	1-7/16"	36.51	1.4375"		HRK1405128	HRK1410128	HRK1415128
		37.	1.4567"		HRK1455370	HRK1460370	HRK1465370
	1-15/32"	37.31	1.4688"		HRK1405130	HRK1410130	HRK1415130
		38.	1.4961"		HRK1455380	HRK1460380	HRK1465380
	1-1/2"	38.1	1.5"		HRK1405132	HRK1410132	HRK1415132
	1-17/32"	38.89	1.5313"		HRK1405134	HRK1410134	HRK1415134
		39.	1.5354"		HRK1455390	HRK1460390	HRK1465390
	1-9/16"	39.69	1.5625"		HRK1405136	HRK1410136	HRK1415136
		4.	1.5748"		HRK1455400	HRK1460400	HRK1465400
	1-19/32"	4.48	1.5938"		HRK1405138	HRK1410138	HRK1415138
		41.	1.6142"		HRK1455410	HRK1460410	HRK1465410
	1-5/8"	41.28	1.625"		HRK1405140	HRK1410140	HRK1415140
		42.	1.6535"		HRK1455420	HRK1460420	HRK1465420
	1-21/32"	42.7	1.6563"		HRK1405142	HRK1410142	HRK1415142
	1-11/16"	42.86	1.6875"		HRK1405144	HRK1410144	HRK1415144
		43.	1.6929"		HRK1455430	HRK1460430	HRK1465430
	1-23/32"	43.66	1.7188"		HRK1405146	HRK1410146	HRK1415146
		44.	1.7323"		HRK1455440	HRK1460440	HRK1465440
	1-3/4"	44.45	1.75"		HRK1405148	HRK1410148	HRK1415148
		45.	1.7717"		HRK1455450	HRK1460450	HRK1465450
	1-25/32"	45.24	1.7813"		HRK1405150	HRK1410150	HRK1415150
		46.	1.811"		HRK1455460	HRK1460460	HRK1465460
	1-13/16"	46.4	1.8125"		HRK1405152	HRK1410152	HRK1415152
	1-27/32"	46.83	1.8438"		HRK1405154	HRK1410154	HRK1415154
		47.	1.854"		HRK1455470	HRK1460470	HRK1465470
	1-7/8"	47.63	1.875"		HRK1405156	HRK1410156	HRK1415156

HRK - SPADE DRILL INSERTS - HSS M4 PŁYTKI ŁOPATKOWE HRK- HSS M4

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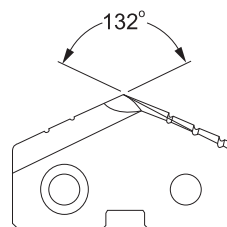
Series Seria	Diameter Średnica			Thick Grubość	EDP		
	Inch (inch) Calowy (cale)	Metric (mm) Metryczny (mm)	Decimal (inch) Dziesiętny (cale)	Metric (mm/inch) Metryczny (mm/cale)	TiN	TiCN	TiAlN
4		48.	1.8898"	7.9 (5/16")	HRK1455480	HRK1460480	HRK1465480
	1-29/32"	48.42	1.963"		HRK1405158	HRK1410158	HRK1415158
		49.	1.9291"		HRK1455490	HRK1460490	HRK1465490
	1-15/16"	49.21	1.9375"		HRK1405160	HRK1410160	HRK1415160
		5.	1.9685"		HRK1455500	HRK1460500	HRK1465500
	1-31/32"	5.1	1.9688"		HRK1405162	HRK1410162	HRK1415162
	2"	5.8	2."		HRK1405200	HRK1410200	HRK1415200
		51.	2.79"		HRK1455510	HRK1460510	HRK1465510
	2-1/32"	51.59	2.313"		HRK1405202	HRK1410202	HRK1415202
	2-3/64"	52.	2.472"		HRK1405203	HRK1410203	HRK1415203
	2-1/16"	52.39	2.625"		HRK1405204	HRK1410204	HRK1415204
		53.	2.866"		HRK1455530	HRK1460530	HRK1465530
	2-3/32"	53.18	2.938"		HRK1405206	HRK1410206	HRK1415206
	2-1/8"	53.98	2.125"		HRK1405208	HRK1410208	HRK1415208
		54.	2.126"		HRK1455540	HRK1460540	HRK1465540
	2-5/32"	54.79	2.1563"		HRK1405210	HRK1410210	HRK1415210
		55.	2.1654"		HRK1455550	HRK1460550	HRK1465550
	2-3/16"	55.56	2.1875"		HRK1405212	HRK1410212	HRK1415212
		56.	2.247"		HRK1455560	HRK1460560	HRK1465560
	2-7/32"	56.36	2.2188"		HRK1405214	HRK1410214	HRK1415214
		57.	2.2441"		HRK1455570	HRK1460570	HRK1465570
	2-1/4"	57.15	2.25"		HRK1405216	HRK1410216	HRK1415216
	2-9/32"	57.94	2.2813"		HRK1405218	HRK1410218	HRK1415218
		58.	2.2835"		HRK1455580	HRK1460580	HRK1465580
	2-5/16"	58.74	2.3125"		HRK1405220	HRK1410220	HRK1415220
		59.	2.3228"		HRK1455590	HRK1460590	HRK1465590
	2-11/32"	59.53	2.3438"		HRK1405222	HRK1410222	HRK1415222
		6.	2.3622"		HRK1455600	HRK1460600	HRK1465600
	2-3/8"	6.33	2.375"		HRK1405224	HRK1410224	HRK1415224
		61.	2.416"		HRK1455610	HRK1460610	HRK1465610

HRK - SPADE DRILL INSERTS - HSS M4

PŁYTKI ŁOPATKOWE HRK- HSS M4

- For general use in steels and cast irons.
- Set up time can be reduced due to changing inserts easily on the machine.
- Any non-standard size available.

- Do obróbki ogólnej stali i żeliwa
- Możliwość skrócenia czasów przezbrojeń, płytki można wymieniać bezpośrednio na maszynie.
- Dostępny każdy niestandardowy wymiar.

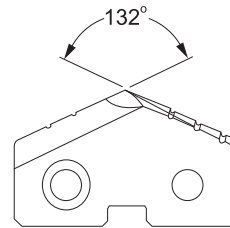


Series Seria	Diameter Średnica			Thick Grubość	EDP		
	Inch (inch) Calowy (cale)	Metric (mm) Metryczny (mm)	Decimal (inch) Dziesiętny (cale)	Metric (mm/inch) Metryczny (mm/cale)	TiN	TiCN	TiAlN
4	2-13/32"	61.12	2.463"	7.9 (5/16")	HRK1405226	HRK1410226	HRK1415226
	2-7/16"	61.91	2.4375"		HRK1405228	HRK1410228	HRK1415228
		62.	2.449"		HRK1455620	HRK1460620	HRK1465620
	2-15/32"	62.71	2.4688"		HRK1405230	HRK1410230	HRK1415230
		63.	2.483"		HRK1455630	HRK1460630	HRK1465630
	2-1/2"	63.5	2.5"		HRK1405232	HRK1410232	HRK1415232
		64.	2.5197"		HRK1455640	HRK1460640	HRK1465640
	2-17/32"	64.29	2.5313"		HRK1405234	HRK1410234	HRK1415234
		65.	2.5591"		HRK1455650	HRK1460650	HRK1465650
	2-9/16"	65.9	2.5625"		HRK1405236	HRK1410236	HRK1415236

HRK - SPADE DRILL INSERTS - HSS M4 PŁYTKI ŁOPATKOWE HRK- HSS M4

- For general use in steels and cast irons.
- Set up time can be reduced due to changing inserts easily on the machine.
- Any non-standard size available.

- Do obróbki ogólnej stali i żeliwa
- Możliwość skrócenia czasów przezbrojeń, płytki można wymieniać bezpośrednio na maszynie.
- Dostępny każdy niestandardowy wymiar.



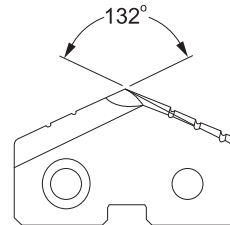
Series Seria	Diameter Średnica			Thick Grubość	EDP		
	Inch (inch) Calowy (cale)	Metric (mm) Metryczny (mm)	Decimal (inch) Dziesiętny (cale)		TiN	TiCN	TiAlN
5	2-1/2"	63.5	2.5"	11.1 (7/16")	HRK14052D2	HRK14102D2	HRK14152D2
		64.	2.5197"		HRK145564A	HRK146064A	HRK146564A
	2-17/32"	64.29	2.5313"		HRK14052D4	HRK14102D4	HRK14152D4
	2-9/16"	65.9	2.5625"		HRK14052D6	HRK14102D6	HRK14152D6
	2-19/32"	65.88	2.5938"		HRK1405238	HRK1410238	HRK1415238
		66.	2.5984"		HRK1455660	HRK1460660	HRK1465660
	2-5/8"	66.68	2.625"		HRK1405240	HRK1410240	HRK1415240
	2-21/32"	67.47	2.6563"		HRK1405242	HRK1410242	HRK1415242
		68.	2.6772"		HRK1455680	HRK1460680	HRK1465680
	2-11/16"	68.26	2.6875"		HRK1405244	HRK1410244	HRK1415244
	2-23/32"	69.5	2.7188"		HRK1405246	HRK1410246	HRK1415246
	2-3/4"	69.85	2.75"		HRK1405248	HRK1410248	HRK1415248
		7.	2.7559"		HRK1455700	HRK1460700	HRK1465700
	2-25/32"	7.64	2.7813"		HRK1405250	HRK1410250	HRK1415250
	2-13/16"	71.44	2.8125"		HRK1405252	HRK1410252	HRK1415252
		72.	2.8346"		HRK1455720	HRK1460720	HRK1465720
	2-27/32"	72.23	2.8438"		HRK1405254	HRK1410254	HRK1415254
	2-7/8"	73.3	2.875"		HRK1405256	HRK1410256	HRK1415256
5	2-29/32"	73.82	2.963"	11.1 (7/16")	HRK1405258	HRK1410258	HRK1415258
		74.	2.9134"		HRK1455740	HRK1460740	HRK1465740
	2-15/16"	74.61	2.9375"		HRK1405260	HRK1410260	HRK1415260
	2-31/32"	75.41	2.9688"		HRK1405262	HRK1410262	HRK1415262
		76.	2.9921"		HRK1455760	HRK1460760	HRK1465760
	3"	76.2	3."		HRK1405300	HRK1410300	HRK1415300

HRK - SPADE DRILL INSERTS - HSS M4

PŁYTKI ŁOPATKOWE HRK- HSS M4

- For general use in steels and cast irons.
- Set up time can be reduced due to changing inserts easily on the machine.
- Any non-standard size available.

- Do obróbki ogólnej stali i żeliwa
- Możliwość skrócenia czasów przezbrojeń, płytki można wymieniać bezpośrednio na maszynie.
- Dostępny każdy niestandardowy wymiar.



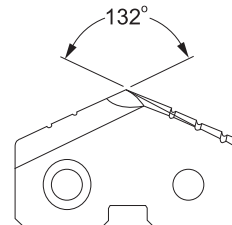
Series Seria	Diameter Średnica			Thick Grubość	EDP		
	Inch (inch) Calowy (cale)	Metric (mm) Metryczny (mm)	Decimal (inch) Dziesiętny (cale)		TiN	TiCN	TiAlN
6	3-1/32"	76.99	3.313"	11.1 (7/16")	HRK1405302	HRK1410302	HRK1415302
	3-1/16"	77.79	3.625"		HRK1405304	HRK1410304	HRK1415304
		78.	3.79"		HRK1455780	HRK1460780	HRK1465780
	3-3/32"	78.58	3.938"		HRK1405306	HRK1410306	HRK1415306
	3-1/8"	79.38	3.125"		HRK1405308	HRK1410308	HRK1415308
		8.	3.1496"		HRK1455800	HRK1460800	HRK1465800
	3-5/32"	8.17	3.1563"		HRK1405310	HRK1410310	HRK1415310
	3-3/16"	8.96	3.1875"		HRK1405312	HRK1410312	HRK1415312
	3-7/32"	81.76	3.2188"		HRK1405314	HRK1410314	HRK1415314
		82.	3.2283"		HRK1455820	HRK1460820	HRK1465820
	3-1/4"	82.55	3.25"		HRK1405316	HRK1410316	HRK1415316
	3-9/32"	83.34	3.2813"		HRK1405318	HRK1410318	HRK1415318
		84.	3.371"		HRK1455840	HRK1460840	HRK1465840
	3-5/16"	84.14	3.3125"		HRK1405320	HRK1410320	HRK1415320
	3-11/32"	84.93	3.3438"		HRK1405322	HRK1410322	HRK1415322
	3-3/8"	85.73	3.375"		HRK1405324	HRK1410324	HRK1415324
		86.	3.3858"		HRK1455860	HRK1460860	HRK1465860
	3-13/32"	86.52	3.463"		HRK1405326	HRK1410326	HRK1415326
	3-7/16"	87.31	3.4375"		HRK1405328	HRK1410328	HRK1415328
		88.	3.4646"		HRK1455880	HRK1460880	HRK1465880
	3-15/32"	88.11	3.4688"		HRK1405330	HRK1410330	HRK1415330
	3-1/2"	88.9	3.5"		HRK1405332	HRK1410332	HRK1415332

HRK - SPADE DRILL INSERTS - HSS M4

PŁYTKI ŁOPATKOWE HRK- HSS M4

- For general use in steels and cast irons.
- Set up time can be reduced due to changing inserts easily on the machine.
- Any non-standard size available.

- Do obróbki ogólnej stali i żeliwa
- Możliwość skrócenia czasów przezbrojeń, płytki można wymieniać bezpośrednio na maszynie.
- Dostępny każdy niestandardowy wymiar.



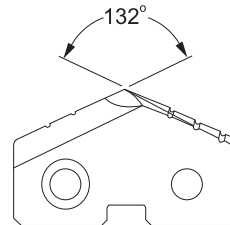
Series Seria	Diameter Średnica			Thick Grubość	EDP		
	Inch (inch) Calowy (cale)	Metric (mm) Metryczny (mm)	Decimal (inch) Dziesiętny (cale)		TiN	TiCN	TiAlN
7	3-17/32"	89.69	3.5313"	11.1 (7/16")	HRK1405334	HRK1410334	HRK1415334
		9.	3.5433"		HRK1455900	HRK1460900	HRK1465900
	3-9/16"	9.49	3.5625"		HRK1405336	HRK1410336	HRK1415336
	3-19/32"	91.28	3.5938"		HRK1405338	HRK1410338	HRK1415338
		92.	3.6221"		HRK1455920	HRK1460920	HRK1465920
	3-5/8"	92.8	3.625"		HRK1405340	HRK1410340	HRK1415340
	3-21/32"	92.87	3.6563"		HRK1405342	HRK1410342	HRK1415342
	3-11/16"	93.66	3.6875"		HRK1405344	HRK1410344	HRK1415344
		94.	3.78"		HRK1455940	HRK1460940	HRK1465940
	3-23/32"	94.46	3.7188"		HRK1405346	HRK1410346	HRK1415346
	3-3/4"	95.25	3.75"		HRK1405348	HRK1410348	HRK1415348
		96.	3.7795"		HRK1455960	HRK1460960	HRK1465960
	3-25/32"	96.4	3.7813"		HRK1405350	HRK1410350	HRK1415350
	3-13/16"	96.84	3.8125"		HRK1405352	HRK1410352	HRK1415352
	3-27/32"	97.63	3.8438"		HRK1405354	HRK1410354	HRK1415354
		98.	3.8583"		HRK1455980	HRK1460980	HRK1465980
	3-7/8"	98.43	3.875"		HRK1405356	HRK1410356	HRK1415356
	3-29/32"	99.22	3.963"		HRK1405358	HRK1410358	HRK1415358
		1.	3.937"		HRK1455A00	HRK1460A00	HRK1465A00
	3-15/16"	1.1	3.9375"		HRK1405360	HRK1410360	HRK1415360
	3-31/32"	1.81	3.9688"		HRK1405362	HRK1410362	HRK1415362
	4"	11.6	4."		HRK1405400	HRK1410400	HRK1415400

HRK - SPADE DRILL INSERTS - HSS M4

PŁYTKI ŁOPATKOWE HRK- HSS M4

- For general use in steels and cast irons.
- Set up time can be reduced due to changing inserts easily on the machine.
- Any non-standard size available.

- Do obróbki ogólnej stali i żeliwa
- Możliwość skrócenia czasów przezbrojeń, płytki można wymieniać bezpośrednio na maszynie.
- Dostępny każdy niestandardowy wymiar.



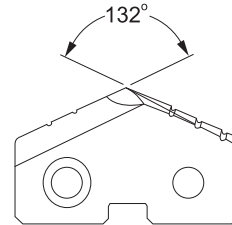
Series Seria	Diameter Średnica			Thick Grubość	EDP		
	Inch (inch) Calowy (cale)	Metric (mm) Metryczny (mm)	Decimal (inch) Dziesiętny (cale)		TiN	TiCN	TiAlN
8	4-1/64"	12.	4.157"	11.1 (7/16")	HRK1405401	HRK1410401	HRK1415401
	4-1/16"	13.19	4.625"		HRK1405404	HRK1410404	HRK1415404
	4-3/32"	14.	4.945"		HRK1405406	HRK1410406	HRK1415406
	4-1/8"	14.78	4.125"		HRK1405408	HRK1410408	HRK1415408
		16.	4.1732"		HRK1455A60	HRK1460A60	HRK1465A60
	4-3/16"	16.36	4.1875"		HRK1405412	HRK1410412	HRK1415412
	4-1/4"	17.95	4.25"		HRK1405416	HRK1410416	HRK1415416
		18.	4.252"		HRK1455A80	HRK1460A80	HRK1465A80
	4-5/16"	19.54	4.3125"		HRK1405420	HRK1410420	HRK1415420
		11.	4.337"		HRK1455B00	HRK1460B00	HRK1465B00
	4-3/8"	111.13	4.375"		HRK1405424	HRK1410424	HRK1415424
		112.	4.494"		HRK1455B20	HRK1460B20	HRK1465B20
	4-7/16"	112.71	4.4375"		HRK1405428	HRK1410428	HRK1415428
		114.	4.4882"		HRK1455B40	HRK1460B40	HRK1465B40
	4-1/2"	114.3	4.5"		HRK1405432	HRK1410432	HRK1415432

HRK - SPADE DRILL INSERTS - SUPER HSS T15

PŁYTKI ŁOPATKOWE HRK - SUPER HSS T15

- For use in high nickel alloys and materials over 280 Brinell.
- Set up time can be reduced due to changing inserts easily on the machine.
- Any non-standard size available.

- Do obróbki stopów z wysoką zawartością niklu oraz materiałów powyżej 280 HB twardości.
- Możliwość skrócenia czasów przezbrojeń, płytki można wymieniać bezpośrednio na maszynie.
- Dostępny każdy niestandardowy wymiar.



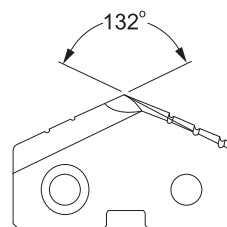
Series Seria	Diameter Średnica			Thick Grubość	EDP		
	Inch (inch) Calowy (cale)	Metric (mm) Metryczny (mm)	Decimal (inch) Dziesiętny (cale)		TiN	TiCN	TiAlN
Y		9.5	.374"	2.4 (3/32")	HRK1155095	HRK1160095	HRK1165095
	3/8"	9.53	.375"		HRK1105024	HRK1110024	HRK1115024
		9.8	.386"		HRK1155098	HRK1160098	HRK1165098
	25/64"	9.92	.396"		HRK1105025	HRK1110025	HRK1115025
		1.	.3937"		HRK1155100	HRK1160100	HRK1165100
		1.2	.416"		HRK1155102	HRK1160102	HRK1165102
	13/32"	1.32	.463"		HRK1105026	HRK1110026	HRK1115026
		1.5	.4134"		HRK1155105	HRK1160105	HRK1165105
	27/64"	1.72	.4219"		HRK1105027	HRK1110027	HRK1115027
		1.8	.4252"		HRK1155108	HRK1160108	HRK1165108
		11.	.4331"		HRK1155110	HRK1160110	HRK1165110
Z	7/16"	11.11	.4375"	2.4 (3/32")	HRK1105028	HRK1110028	HRK1115028
		11.5	.4528"		HRK1155115	HRK1160115	HRK1165115
	29/64"	11.51	.4531"		HRK1105029	HRK1110029	HRK1115029
	15/32"	11.91	.4688"		HRK1105030	HRK1110030	HRK1115030
		12.	.4724"		HRK1155120	HRK1160120	HRK1165120
	31/64"	12.3	.4844"		HRK1105031	HRK1110031	HRK1115031
		12.5	.4921"		HRK1155125	HRK1160125	HRK1165125
	1/2"	12.7	.5"		HRK1105032	HRK1110032	HRK1115032

HRK - SPADE DRILL INSERTS - SUPER HSS T15

PŁYTKI ŁOPATKOWE HRK - SUPER HSS T15

- For use in high nickel alloys and materials over 280 Brinell.
- Set up time can be reduced due to changing inserts easily on the machine.
- Any non-standard size available.

- Do obróbki stopów z wysoką zawartością niklu oraz materiałów powyżej 280 HB twardości.
- Możliwość skrócenia czasów przezbrojeń, płytki można wymieniać bezpośrednio na maszynie.
- Dostępny każdy niestandardowy wymiar.



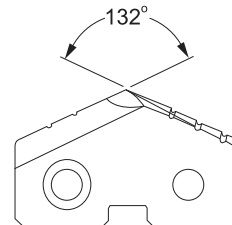
Series Seria	Diameter Średnica			Thick Grubość	EDP		
	Inch (inch) Calowy (cale)	Metric (mm) Metryczny (mm)	Decimal (inch) Dziesiętny (cale)		TiN	TiCN	TiAlN
0		13.	.5118"	3.2 (1/8")	HRK1155130	HRK1160130	HRK1165130
	33/64"	13.1	.5156"		HRK1105033	HRK1110033	HRK1115033
	17/32"	13.49	.5313"		HRK1105034	HRK1110034	HRK1115034
		13.5	.5315"		HRK1155135	HRK1160135	HRK1165135
	35/64"	13.89	.5469"		HRK1105035	HRK1110035	HRK1115035
		14.	.5512"		HRK1155140	HRK1160140	HRK1165140
	9/16"	14.29	.5625"		HRK1105036	HRK1110036	HRK1115036
		14.5	.579"		HRK1155145	HRK1160145	HRK1165145
	37/64"	14.68	.5781"		HRK1105037	HRK1110037	HRK1115037
		15.	.596"		HRK1155150	HRK1160150	HRK1165150
	19/32"	15.8	.5938"		HRK1105038	HRK1110038	HRK1115038
	39/64"	15.48	.694"		HRK1105039	HRK1110039	HRK1115039
		15.5	.612"		HRK1155155	HRK1160155	HRK1165155
	5/8"	15.88	.625"		HRK1105040	HRK1110040	HRK1115040
		16.	.6299"	3.2 (1/8")	HRK1155160	HRK1160160	HRK1165160
	41/64"	16.27	.646"		HRK1105041	HRK1110041	HRK1115041
		16.5	.6496"		HRK1155165	HRK1160165	HRK1165165
	21/32"	16.67	.6563"		HRK1105042	HRK1110042	HRK1115042
		17.	.6693"		HRK1155170	HRK1160170	HRK1165170
	43/64"	17.7	.6719"		HRK1105043	HRK1110043	HRK1115043
	11/16"	17.46	.6875"		HRK1105044	HRK1110044	HRK1115044
		17.5	.689"		HRK1155175	HRK1160175	HRK1165175

HRK - SPADE DRILL INSERTS - SUPER HSS T15

PŁYTKI ŁOPATKOWE HRK - SUPER HSS T15

- For use in high nickel alloys and materials over 280 Brinell.
- Set up time can be reduced due to changing inserts easily on the machine.
- Any non-standard size available.

- Do obróbki stopów z wysoką zawartością niklu oraz materiałów powyżej 280 HB twardości.
- Możliwość skrócenia czasów przezbrojeń, płytki można wymieniać bezpośrednio na maszynie.
- Dostępny każdy niestandardowy wymiar.



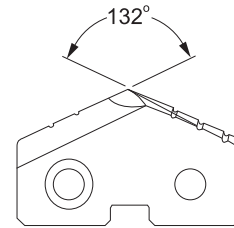
Series Seria	Diameter Średnica			Thick Grubość	EDP		
	Inch (inch) Calowy (cale)	Metric (mm) Metryczny (mm)	Decimal (inch) Dziesiętny (cale)		TiN	TiCN	TiAlN
1	45/64"	17.86	.731"	4. (5/32")	HRK1105045	HRK1110045	HRK1115045
		18.	.787"		HRK1155180	HRK1160180	HRK1165180
	23/32"	18.26	.7188"		HRK1105046	HRK1110046	HRK1115046
		18.5	.7283"		HRK1155185	HRK1160185	HRK1165185
	47/64"	18.65	.7344"		HRK1105047	HRK1110047	HRK1115047
		19.	.748"		HRK1155190	HRK1160190	HRK1165190
	3/4"	19.5	.75"		HRK1105048	HRK1110048	HRK1115048
	49/64"	19.45	.7656"		HRK1105049	HRK1110049	HRK1115049
		19.5	.7677"		HRK1155195	HRK1160195	HRK1165195
	25/32"	19.84	.7813"		HRK1105050	HRK1110050	HRK1115050
		2.	.7874"		HRK1155200	HRK1160200	HRK1165200
	51/64"	2.24	.7969"		HRK1105051	HRK1110051	HRK1115051
		2.5	.871"		HRK1155205	HRK1160205	HRK1165205
	13/16"	2.64	.8125"		HRK1105052	HRK1110052	HRK1115052
		21.	.8268"		HRK1155210	HRK1160210	HRK1165210
	27/32"	21.43	.8438"		HRK1105054	HRK1110054	HRK1115054
	55/64"	21.83	.8594"		HRK1105055	HRK1110055	HRK1115055
		22.	.8661"		HRK1155220	HRK1160220	HRK1165220
	7/8"	22.23	.875"		HRK1105056	HRK1110056	HRK1115056
	57/64"	22.62	.896"		HRK1105057	HRK1110057	HRK1115057
		23.	.955"		HRK1155230	HRK1160230	HRK1165230
	29/32"	23.2	.963"		HRK1105058	HRK1110058	HRK1115058
	59/64"	23.42	.9219"		HRK1105059	HRK1110059	HRK1115059
	15/16"	23.81	.9375"		HRK1105060	HRK1110060	HRK1115060
		24.	.9449"		HRK1155240	HRK1160240	HRK1165240

HRK - SPADE DRILL INSERTS - SUPER HSS T15

PŁYTKI ŁOPATKOWE HRK - SUPER HSS T15

- For use in high nickel alloys and materials over 280 Brinell.
- Set up time can be reduced due to changing inserts easily on the machine.
- Any non-standard size available.

- Do obróbki stopów z wysoką zawartością niklu oraz materiałów powyżej 280 HB twardości.
- Możliwość skrócenia czasów przezbrojeń, płytki można wymieniać bezpośrednio na maszynie.
- Dostępny każdy niestandardowy wymiar.



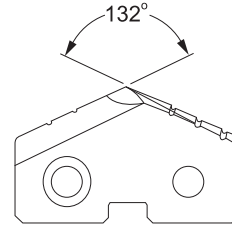
Series Seria	Diameter Średnica			Thick Grubość	EDP		
	Inch (inch) Calowy (cale)	Metric (mm) Metryczny (mm)	Decimal (inch) Dziesiętny (cale)		TiN	TiCN	TiAlN
2	31/32"	24.61	.9688"	4.8 (3/16")	HRK1105062	HRK1110062	HRK1115062
	63/64"	25.	.9843"		HRK1105063	HRK1110063	HRK1115063
	1"	25.4	1."		HRK1105100	HRK1110100	HRK1115100
	1-1/64"	25.8	1.156"		HRK1105101	HRK1110101	HRK1115101
		26.	1.236"		HRK1155260	HRK1160260	HRK1165260
	1-1/32"	26.19	1.313"		HRK1105102	HRK1110102	HRK1115102
	1-3/64"	26.59	1.469"		HRK1105103	HRK1110103	HRK1115103
	1-1/16"	26.99	1.625"		HRK1105104	HRK1110104	HRK1115104
		27.	1.63"		HRK1155270	HRK1160270	HRK1165270
	1-3/32"	27.78	1.938"		HRK1105106	HRK1110106	HRK1115106
		28.	1.124"		HRK1155280	HRK1160280	HRK1165280
	1-7/64"	28.18	1.194"		HRK1105107	HRK1110107	HRK1115107
	1-1/8"	28.58	1.125"		HRK1105108	HRK1110108	HRK1115108
		29.	1.1417"		HRK1155290	HRK1160290	HRK1165290
	1-5/32"	29.37	1.1563"		HRK1105110	HRK1110110	HRK1115110
		3.	1.1811"		HRK1155300	HRK1160300	HRK1165300
	1-3/16"	3.16	1.1875"		HRK1105112	HRK1110112	HRK1115112
	1-7/32"	3.96	1.2188"		HRK1105114	HRK1110114	HRK1115114
		31.	1.225"		HRK1155310	HRK1160310	HRK1165310
	1-1/4"	31.75	1.25"		HRK1105116	HRK1110116	HRK1115116
		32.	1.2598"		HRK1155320	HRK1160320	HRK1165320
	1-9/32"	32.54	1.2813"		HRK1105118	HRK1110118	HRK1115118
	1-5/16"	33.	1.2992"		HRK1155330	HRK1160330	HRK1165330
		33.34	1.3125"		HRK1105120	HRK1110120	HRK1115120
	1-	34.	1.3386"		HRK1155340	HRK1160340	HRK1165340
	11/32"	34.13	1.3438"		HRK1105122	HRK1110122	HRK1115122
	1-3/8"	34.93	1.375"		HRK1105124	HRK1110124	HRK1115124
		35.	1.378"		HRK1155350	HRK1160350	HRK1165350

HRK - SPADE DRILL INSERTS - SUPER HSS T15

PŁYTKI ŁOPATKOWE HRK - SUPER HSS T15

- For use in high nickel alloys and materials over 280 Brinell.
- Set up time can be reduced due to changing inserts easily on the machine.
- Any non-standard size available.

- Do obróbki stopów z wysoką zawartością niklu oraz materiałów powyżej 280 HB twardości.
- Możliwość skrócenia czasów przezbrojeń, płytki można wymieniać bezpośrednio na maszynie.
- Dostępny każdy niestandardowy wymiar.



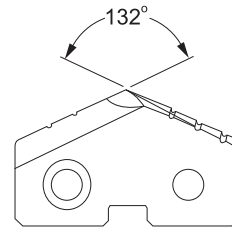
Series Seria	Diameter Średnica			Thick Grubość	EDP		
	Inch (inch) Calowy (cale)	Metric (mm) Metryczny (mm)	Decimal (inch) Dziesiętny (cale)		TiN	TiCN	TiAlN
3	1-13/32"	35.72	1.463"	6.4 (1/4")	HRK1105126	HRK1110126	HRK1115126
		36.	1.4173"		HRK1155360	HRK1160360	HRK1165360
	1-7/16"	36.51	1.4375"		HRK1105128	HRK1110128	HRK1115128
		37.	1.4567"		HRK1155370	HRK1160370	HRK1165370
	1-15/32"	37.31	1.4688"		HRK1105130	HRK1110130	HRK1115130
		38.	1.4961"		HRK1155380	HRK1160380	HRK1165380
	1-1/2"	38.1	1.5"		HRK1105132	HRK1110132	HRK1115132
	1-17/32"	38.89	1.5313"		HRK1105134	HRK1110134	HRK1115134
		39.	1.5354"		HRK1155390	HRK1160390	HRK1165390
	1-9/16"	39.69	1.5625"		HRK1105136	HRK1110136	HRK1115136
		4.	1.5748"		HRK1155400	HRK1160400	HRK1165400
	1-19/32"	4.48	1.5938"		HRK1105138	HRK1110138	HRK1115138
		41.	1.6142"		HRK1155410	HRK1160410	HRK1165410
	1-5/8"	41.28	1.625"		HRK1105140	HRK1110140	HRK1115140
		42.	1.6535"		HRK1155420	HRK1160420	HRK1165420
	1-21/32"	42.7	1.6563"		HRK1105142	HRK1110142	HRK1115142
	1-11/16"	42.86	1.6875"		HRK1105144	HRK1110144	HRK1115144
		43.	1.6929"		HRK1155430	HRK1160430	HRK1165430
	1-23/32"	43.66	1.7188"		HRK1105146	HRK1110146	HRK1115146
		44.	1.7323"		HRK1155440	HRK1160440	HRK1165440
	1-3/4"	44.45	1.75"		HRK1105148	HRK1110148	HRK1115148
		45.	1.7717"		HRK1155450	HRK1160450	HRK1165450
	1-25/32"	45.24	1.7813"		HRK1105150	HRK1110150	HRK1115150
		46.	1.811"		HRK1155460	HRK1160460	HRK1165460
	1-13/16"	46.4	1.8125"		HRK1105152	HRK1110152	HRK1115152
	1-27/32"	46.83	1.8438"		HRK1105154	HRK1110154	HRK1115154
		47.	1.854"		HRK1155470	HRK1160470	HRK1165470
	1-7/8"	47.63	1.875"		HRK1105156	HRK1110156	HRK1115156

HRK - SPADE DRILL INSERTS - SUPER HSS T15

PŁYTKI ŁOPATKOWE HRK - SUPER HSS T15

- For use in high nickel alloys and materials over 280 Brinell.
- Set up time can be reduced due to changing inserts easily on the machine.
- Any non-standard size available.

- Do obróbki stopów z wysoką zawartością niklu oraz materiałów powyżej 280 HB twardości.
- Możliwość skrócenia czasów przezbrojeń, płytki można wymieniać bezpośrednio na maszynie.
- Dostępny każdy niestandardowy wymiar.



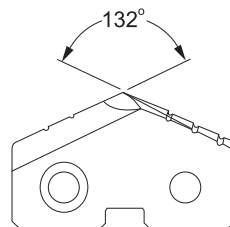
Series Seria	Diameter Średnica			Thick Grubość	EDP		
	Inch (inch) Calowy (cale)	Metric (mm) Metryczny (mm)	Decimal (inch) Dziesiętny (cale)		TiN	TiCN	TiAlN
4		48.	1.8898"	7.9 (5/16")	HRK1155480	HRK1160480	HRK1165480
	1-29/32"	48.42	1.963"		HRK1105158	HRK1110158	HRK1115158
		49.	1.9291"		HRK1155490	HRK1160490	HRK1165490
	1-15/16"	49.21	1.9375"		HRK1105160	HRK1110160	HRK1115160
		5.	1.9685"		HRK1155500	HRK1160500	HRK1165500
	1-31/32"	5.1	1.9688"		HRK1105162	HRK1110162	HRK1115162
	2"	5.8	2."		HRK1105200	HRK1110200	HRK1115200
		51.	2.79"		HRK1155510	HRK1160510	HRK1165510
	2-1/32"	51.59	2.313"		HRK1105202	HRK1110202	HRK1115202
	2-3/64"	52.	2.472"		HRK1105203	HRK1110203	HRK1115203
	2-1/16"	52.39	2.625"		HRK1105204	HRK1110204	HRK1115204
		53.	2.866"		HRK1155530	HRK1160530	HRK1165530
	2-3/32"	53.18	2.938"		HRK1105206	HRK1110206	HRK1115206
	2-1/8"	53.98	2.125"		HRK1105208	HRK1110208	HRK1115208
		54.	2.126"		HRK1155540	HRK1160540	HRK1165540
	2-5/32"	54.79	2.1563"		HRK1105210	HRK1110210	HRK1115210
		55.	2.1654"		HRK1155550	HRK1160550	HRK1165550
	2-3/16"	55.56	2.1875"		HRK1105212	HRK1110212	HRK1115212
		56.	2.247"		HRK1155560	HRK1160560	HRK1165560
	2-7/32"	56.36	2.2188"		HRK1105214	HRK1110214	HRK1115214
		57.	2.2441"		HRK1155570	HRK1160570	HRK1165570
	2-1/4"	57.15	2.25"		HRK1105216	HRK1110216	HRK1115216
	2-9/32"	57.94	2.2813"		HRK1105218	HRK1110218	HRK1115218
		58.	2.2835"		HRK1155580	HRK1160580	HRK1165580
	2-5/16"	58.74	2.3125"		HRK1105220	HRK1110220	HRK1115220
		59.	2.3228"		HRK1155590	HRK1160590	HRK1165590
	2-11/32"	59.53	2.3438"		HRK1105222	HRK1110222	HRK1115222
		6.	2.3622"		HRK1155600	HRK1160600	HRK1165600
	2-3/8"	6.33	2.375"		HRK1105224	HRK1110224	HRK1115224
		61.	2.416"		HRK1155610	HRK1160610	HRK1165610
	2-13/32"	61.12	2.463"		HRK1105226	HRK1110226	HRK1115226
	2-7/16"	61.91	2.4375"		HRK1105228	HRK1110228	HRK1115228

HRK - SPADE DRILL INSERTS - SUPER HSS T15

PŁYTKI ŁOPATKOWE HRK - SUPER HSS T15

- For use in high nickel alloys and materials over 280 Brinell.
- Set up time can be reduced due to changing inserts easily on the machine.
- Any non-standard size available.

- Do obróbki stopów z wysoką zawartością niklu oraz materiałów powyżej 280 HB twardości.
- Możliwość skrócenia czasów przezbrojeń, płytki można wymieniać bezpośrednio na maszynie.
- Dostępny każdy niestandardowy wymiar.



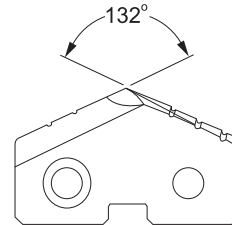
Series Seria	Diameter Średnica			Thick Grubość	EDP		
	Inch (inch) Calowy (cale)	Metric (mm) Metryczny (mm)	Decimal (inch) Dziesiętny (cale)		TiN	TiCN	TiAIN
4		62.	2.449"	7.9 (5/16")	HRK1155620	HRK1160620	HRK1165620
	2-15/32"	62.71	2.4688"		HRK1105230	HRK1110230	HRK1115230
		63.	2.483"		HRK1155630	HRK1160630	HRK1165630
	2-1/2"	63.5	2.5"		HRK1105232	HRK1110232	HRK1115232
		64.	2.5197"		HRK1155640	HRK1160640	HRK1165640
	2-17/32"	64.29	2.5313"		HRK1105234	HRK1110234	HRK1115234
		65.	2.5591"		HRK1155650	HRK1160650	HRK1165650
	2-9/16"	65.9	2.5625"		HRK1105236	HRK1110236	HRK1115236

HRK - SPADE DRILL INSERTS - SUPER HSS M48

PŁYTKI ŁOPATKOWE HRK - SUPER HSS M48

- For use in high temperature alloys and materials with 350~500 Brinell.
- Set up time can be reduced due to changing inserts easily on the machine.
- Any non-standard size available.

- Do obróbki stopów żarowytrzymałych oraz materiałów o twardości 350~500 HB.
- Możliwość skrócenia czasów przezbrojeń, płytki można wymieniać bezpośrednio na maszynie.
- Dostępny każdy niestandardowy wymiar.



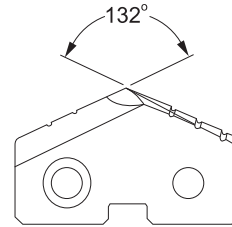
Series Seria	Diameter Średnica			Thick Grubość	EDP		
	Inch (inch) Calowy (cale)	Metric (mm) Metryczny (mm)	Decimal (inch) Dziesiętny (cale)		TiN	TiCN	TiAlN
Y		9.5	.374"	2.4 (3/32")	HRK1555095	HRK1560095	HRK1565095
	3/8"	9.53	.375"		HRK1505024	HRK1510024	HRK1515024
		9.8	.386"		HRK1555098	HRK1560098	HRK1565098
	25/64"	9.92	.396"		HRK1505025	HRK1510025	HRK1515025
		1.	.3937"		HRK1555100	HRK1560100	HRK1565100
		1.2	.416"		HRK1555102	HRK1560102	HRK1565102
	13/32"	1.32	.463"		HRK1505026	HRK1510026	HRK1515026
		1.5	.4134"		HRK1555105	HRK1560105	HRK1565105
	27/64"	1.72	.4219"		HRK1505027	HRK1510027	HRK1515027
		1.8	.4252"		HRK1555108	HRK1560108	HRK1565108
		11.	.4331"		HRK1555110	HRK1560110	HRK1565110
Z	7/16"	11.11	.4375"	2.4 (3/32")	HRK1505028	HRK1510028	HRK1515028
		11.5	.4528"		HRK1555115	HRK1560115	HRK1565115
	29/64"	11.51	.4531"		HRK1505029	HRK1510029	HRK1515029
	15/32"	11.91	.4688"		HRK1505030	HRK1510030	HRK1515030
		12.	.4724"		HRK1555120	HRK1560120	HRK1565120
	31/64"	12.3	.4844"		HRK1505031	HRK1510031	HRK1515031
		12.5	.4921"		HRK1555125	HRK1560125	HRK1565125
	1/2"	12.7	.5"		HRK1505032	HRK1510032	HRK1515032

HRK - SPADE DRILL INSERTS - SUPER HSS M48

PŁYTKI ŁOPATKOWE HRK - SUPER HSS M48

- For use in high temperature alloys and materials with 350~500 Brinell.
- Set up time can be reduced due to changing inserts easily on the machine.
- Any non-standard size available.

- Do obróbki stopów żarowytrzymałych oraz materiałów o twardości 350~500 HB.
- Możliwość skrócenia czasów przezbrojeń, płytki można wymieniać bezpośrednio na maszynie.
- Dostępny każdy niestandardowy wymiar.



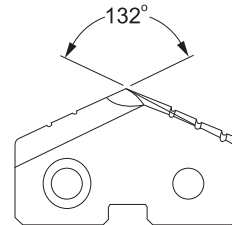
Series Seria	Diameter Średnica			Thick Grubość	EDP		
	Inch (inch) Calowy (cale)	Metric (mm) Metryczny (mm)	Decimal (inch) Dziesiętny (cale)		TiN	TiCN	TiAlN
		13.	.5118"	3.2 (1/8")	HRK1555130	HRK1560130	HRK1565130
	33/64"	13.1	.5156"		HRK1505033	HRK1510033	HRK1515033
	17/32"	13.49	.5313"		HRK1505034	HRK1510034	HRK1515034
		13.5	.5315"		HRK1555135	HRK1560135	HRK1565135
	35/64"	13.89	.5469"		HRK1505035	HRK1510035	HRK1515035
		14.	.5512"		HRK1555140	HRK1560140	HRK1565140
	9/16"	14.29	.5625"		HRK1505036	HRK1510036	HRK1515036
		14.5	.579"		HRK1555145	HRK1560145	HRK1565145
	37/64"	14.68	.5781"		HRK1505037	HRK1510037	HRK1515037
		15.	.596"		HRK1555150	HRK1560150	HRK1565150
	19/32"	15.8	.5938"		HRK1505038	HRK1510038	HRK1515038
	39/64"	15.48	.694"		HRK1505039	HRK1510039	HRK1515039
		15.5	.612"		HRK1555155	HRK1560155	HRK1565155
	5/8"	15.88	.625"	3.2 (1/8")	HRK1505040	HRK1510040	HRK1515040
		16.	.6299"		HRK1555160	HRK1560160	HRK1565160
	41/64"	16.27	.646"		HRK1505041	HRK1510041	HRK1515041
		16.5	.6496"		HRK1555165	HRK1560165	HRK1565165
	21/32"	16.67	.6563"		HRK1505042	HRK1510042	HRK1515042
		17.	.6693"		HRK1555170	HRK1560170	HRK1565170
	43/64"	17.7	.6719"		HRK1505043	HRK1510043	HRK1515043
	11/16"	17.46	.6875"		HRK1505044	HRK1510044	HRK1515044
		17.5	.689"		HRK1555175	HRK1560175	HRK1565175

HRK - SPADE DRILL INSERTS - SUPER HSS M48

PŁYTKI ŁOPATKOWE HRK - SUPER HSS M48

- For use in high temperature alloys and materials with 350~500 Brinell.
- Set up time can be reduced due to changing inserts easily on the machine.
- Any non-standard size available.

- Do obróbki stopów żarowytrzymałych oraz materiałów o twardości 350~500 HB.
- Możliwość skrócenia czasów przezbrojeń, płytki można wymieniać bezpośrednio na maszynie.
- Dostępny każdy niestandardowy wymiar.



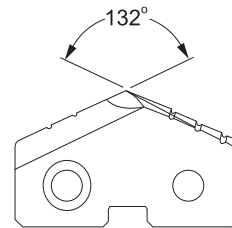
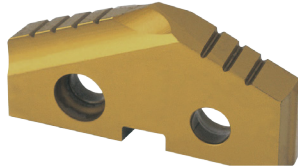
Series Seria	Diameter Średnica			Thick Grubość	EDP		
	Inch (inch) Calowy (cale)	Metric (mm) Metryczny (mm)	Decimal (inch) Dziesiętny (cale)		TiN	TiCN	TiAlN
1	45/64"	17.86	.731"	4. (5/32")	HRK1505045	HRK1510045	HRK1515045
		18.	.787"		HRK1555180	HRK1560180	HRK1565180
	23/32"	18.26	.7188"		HRK1505046	HRK1510046	HRK1515046
		18.5	.7283"		HRK1555185	HRK1560185	HRK1565185
	47/64"	18.65	.7344"		HRK1505047	HRK1510047	HRK1515047
		19.	.748"		HRK1555190	HRK1560190	HRK1565190
	3/4"	19.5	.75"		HRK1505048	HRK1510048	HRK1515048
	49/64"	19.45	.7656"		HRK1505049	HRK1510049	HRK1515049
		19.5	.7677"		HRK1555195	HRK1560195	HRK1565195
	25/32"	19.84	.7813"		HRK1505050	HRK1510050	HRK1515050
		2.	.7874"		HRK1555200	HRK1560200	HRK1565200
	51/64"	2.24	.7969"		HRK1505051	HRK1510051	HRK1515051
		2.5	.871"		HRK1555205	HRK1560205	HRK1565205
	13/16"	2.64	.8125"		HRK1505052	HRK1510052	HRK1515052
		21.	.8268"		HRK1555210	HRK1560210	HRK1565210
	27/32"	21.43	.8438"		HRK1505054	HRK1510054	HRK1515054
	55/64"	21.83	.8594"		HRK1505055	HRK1510055	HRK1515055
		22.	.8661"		HRK1555220	HRK1560220	HRK1565220
	7/8"	22.23	.875"		HRK1505056	HRK1510056	HRK1515056
	57/64"	22.62	.896"		HRK1505057	HRK1510057	HRK1515057
		23.	.955"		HRK1555230	HRK1560230	HRK1565230
	29/32"	23.2	.963"		HRK1505058	HRK1510058	HRK1515058
	59/64"	23.42	.9219"		HRK1505059	HRK1510059	HRK1515059
	15/16"	23.81	.9375"		HRK1505060	HRK1510060	HRK1515060
		24.	.9449"		HRK1555240	HRK1560240	HRK1565240

HRK - SPADE DRILL INSERTS - SUPER HSS M48

PŁYTKI ŁOPATKOWE HRK - SUPER HSS M48

- For use in high temperature alloys and materials with 350~500 Brinell.
- Set up time can be reduced due to changing inserts easily on the machine.
- Any non-standard size available.

- Do obróbki stopów żarowytrzymałych oraz materiałów o twardości 350~500 HB.
- Możliwość skrócenia czasów przezbrojeń, płytki można wymieniać bezpośrednio na maszynie.
- Dostępny każdy niestandardowy wymiar.

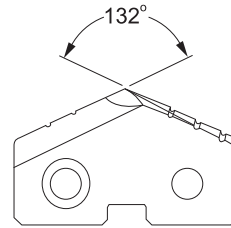


Series Seria	Diameter Średnica			Thick Grubość	EDP		
	Inch (inch) Calowy (cale)	Metric (mm) Metryczny (mm)	Decimal (inch) Dziesiętny (cale)		TiN	TiCN	TiAlN
2	31/32"	24.61	.9688"	4.8 (3/16")	HRK1505062	HRK1510062	HRK1515062
	63/64"	25.	.9843"		HRK1505063	HRK1510063	HRK1515063
	1"	25.4	1."		HRK1505100	HRK1510100	HRK1515100
	1-1/64"	25.8	1.156"		HRK1505101	HRK1510101	HRK1515101
		26.	1.236"		HRK1555260	HRK1560260	HRK1565260
	1-1/32"	26.19	1.313"		HRK1505102	HRK1510102	HRK1515102
	1-3/64"	26.59	1.469"		HRK1505103	HRK1510103	HRK1515103
	1-1/16"	26.99	1.625"		HRK1505104	HRK1510104	HRK1515104
		27.	1.63"		HRK1555270	HRK1560270	HRK1565270
	1-3/32"	27.78	1.938"		HRK1505106	HRK1510106	HRK1515106
		28.	1.124"		HRK1555280	HRK1560280	HRK1565280
	1-7/64"	28.18	1.194"		HRK1505107	HRK1510107	HRK1515107
	1-1/8"	28.58	1.125"		HRK1505108	HRK1510108	HRK1515108
		29.	1.1417"		HRK1555290	HRK1560290	HRK1565290
	1-5/32"	29.37	1.1563"		HRK1505110	HRK1510110	HRK1515110
		3.	1.1811"		HRK1555300	HRK1560300	HRK1565300
	1-3/16"	3.16	1.1875"		HRK1505112	HRK1510112	HRK1515112
	1-7/32"	3.96	1.2188"		HRK1505114	HRK1510114	HRK1515114
		31.	1.225"		HRK1555310	HRK1560310	HRK1565310
	1-1/4"	31.75	1.25"		HRK1505116	HRK1510116	HRK1515116
		32.	1.2598"		HRK1555320	HRK1560320	HRK1565320
	1-9/32"	32.54	1.2813"		HRK1505118	HRK1510118	HRK1515118
		33.	1.2992"		HRK1555330	HRK1560330	HRK1565330
	1-5/16"	33.34	1.3125"		HRK1505120	HRK1510120	HRK1515120
		34.	1.3386"		HRK1555340	HRK1560340	HRK1565340
	1-11/32"	34.13	1.3438"		HRK1505122	HRK1510122	HRK1515122
	1-3/8"	34.93	1.375"		HRK1505124	HRK1510124	HRK1515124
		35.	1.378"		HRK1555350	HRK1560350	HRK1565350

HRKS - SPADE DRILL INSERTS - HSS M4 PŁYTKI ŁOPATKOWE HRKS - HSS M4

- For general use in steels and cast irons.
- Improved stability and hole straightness by newly developed thinning design.
- Less thrust force and excellent self-centering.
- Any non-standard size available.

- Do obróbki ogólnej stali i żeliwa.
- Poprawiona stabilność oraz prostoliniowość otworów dzięki nowoczesnemu przewężeniu rdzenia.
- Niższe siły skrawania oraz doskonałe samocentrowanie.
- Dostępny każdy niestandardowy wymiar.

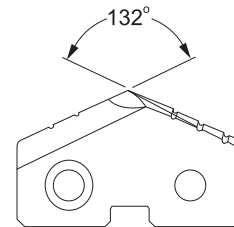


Series Seria	Diameter Średnica			Thick Grubość	EDP		
	Inch (inch) Calowy (cale)	Metric (mm) Metryczny (mm)	Decimal (inch) Dziesiętny (cale)		TiN	TiCN	TiAlN
1	45/64"	17.86	.731"	4. (5/32")	HRKS405045	HRKS410045	HRKS415045
		18.	.787"		HRKS455180	HRKS460180	HRKS465180
	23/32"	18.26	.7188"		HRKS405046	HRKS410046	HRKS415046
		18.5	.7283"		HRKS455185	HRKS460185	HRKS465185
	47/64"	18.65	.7344"		HRKS405047	HRKS410047	HRKS415047
		19.	.748"		HRKS455190	HRKS460190	HRKS465190
	3/4"	19.5	.75"		HRKS405048	HRKS410048	HRKS415048
	49/64"	19.45	.7656"		HRKS405049	HRKS410049	HRKS415049
		19.5	.7677"		HRKS455195	HRKS460195	HRKS465195
	25/32"	19.84	.7812"		HRKS405050	HRKS410050	HRKS415050
		2.	.7874"		HRKS455200	HRKS460200	HRKS465200
	51/64"	2.24	.7969"		HRKS405051	HRKS410051	HRKS415051
		2.5	.871"		HRKS455205	HRKS460205	HRKS465205
	13/16"	2.64	.8125"		HRKS405052	HRKS410052	HRKS415052
		21.	.8268"		HRKS455210	HRKS460210	HRKS465210
	27/32"	21.43	.8438"		HRKS405054	HRKS410054	HRKS415054
	55/64"	21.83	.8594"		HRKS405055	HRKS410055	HRKS415055
		22.	.8661"		HRKS455220	HRKS460220	HRKS465220
	7/8"	22.23	.875"		HRKS405056	HRKS410056	HRKS415056
	57/64"	22.62	.896"		HRKS405057	HRKS410057	HRKS415057
		23.	.955"		HRKS455230	HRKS460230	HRKS465230
	29/32"	23.2	.962"		HRKS405058	HRKS410058	HRKS415058
	59/64"	23.42	.9219"		HRKS405059	HRKS410059	HRKS415059
	15/16"	23.81	.9375"		HRKS405060	HRKS410060	HRKS415060
		24.	.9449"		HRKS455240	HRKS460240	HRKS465240

HRKS - SPADE DRILL INSERTS - HSS M4 PŁYTKI ŁOPATKOWE HRKS - HSS M4

- For general use in steels and cast irons.
- Improved stability and hole straightness by newly developed thinning design.
- Less thrust force and excellent self-centering.
- Any non-standard size available.

- Do obróbki ogólnej stali i żeliwa.
- Poprawiona stabilność oraz prostoliniowość otworów dzięki nowoczesnemu przewężeniu rdzenia.
- Niższe siły skrawania oraz doskonałe samocentrowanie.
- Dostępny każdy niestandardowy wymiar.

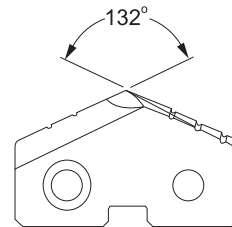


Series Seria	Diameter Średnica			Thick Grubość	EDP		
	Inch (inch) Calowy (cale)	Metric (mm) Metryczny (mm)	Decimal (inch) Dziesiętny (cale)		TiN	TiCN	TiAlN
2	31/32"	24.61	.9688"	4.8 (3/16")	HRKS405062	HRKS410062	HRKS415062
	63/64"	25.	.9843"		HRKS405063	HRKS410063	HRKS415063
	1"	25.4	1."		HRKS405100	HRKS410100	HRKS415100
	1-1/64"	25.8	1.156"		HRKS405101	HRKS410101	HRKS415101
		26.	1.236"		HRKS455260	HRKS460260	HRKS465260
	1-1/32"	26.19	1.312"		HRKS405102	HRKS410102	HRKS415102
	1-3/64"	26.59	1.469"		HRKS405103	HRKS410103	HRKS415103
	1-1/16"	26.99	1.625"		HRKS405104	HRKS410104	HRKS415104
		27.	1.63"		HRKS455270	HRKS460270	HRKS465270
	1-3/32"	27.78	1.938"		HRKS405106	HRKS410106	HRKS415106
		28.	1.124"		HRKS455280	HRKS460280	HRKS465280
	1-7/64"	28.18	1.194"		HRKS405107	HRKS410107	HRKS415107
	1-1/8"	28.58	1.125"		HRKS405108	HRKS410108	HRKS415108
		29.	1.1417"		HRKS455290	HRKS460290	HRKS465290
	1-5/32"	29.37	1.1562"		HRKS405110	HRKS410110	HRKS415110
		3.	1.1811"		HRKS455300	HRKS460300	HRKS465300
	1-3/16"	3.16	1.1875"		HRKS405112	HRKS410112	HRKS415112
	1-7/32"	3.96	1.2188"		HRKS405114	HRKS410114	HRKS415114
		31.	1.225"		HRKS455310	HRKS460310	HRKS465310
	1-1/4"	31.75	1.25"		HRKS405116	HRKS410116	HRKS415116
		32.	1.2598"		HRKS455320	HRKS460320	HRKS465320
	1-9/32"	32.54	1.2812"		HRKS405118	HRKS410118	HRKS415118
		33.	1.2992"		HRKS455330	HRKS460330	HRKS465330
	1-5/16"	33.34	1.3125"		HRKS405120	HRKS410120	HRKS415120
		34.	1.3386"		HRKS455340	HRKS460340	HRKS465340
	1-11/32"	34.13	1.3438"		HRKS405122	HRKS410122	HRKS415122
	1-3/8"	34.93	1.375"		HRKS405124	HRKS410124	HRKS415124
		35.	1.378"		HRKS455350	HRKS460350	HRKS465350

HRKS - SPADE DRILL INSERTS - HSS M4 PŁYTKI ŁOPATKOWE HRKS - HSS M4

- For general use in steels and cast irons.
- Improved stability and hole straightness by newly developed thinning design.
- Less thrust force and excellent self-centering.
- Any non-standard size available.

- Do obróbki ogólnej stali i żeliwa.
- Poprawiona stabilność oraz prostoliniowość otworów dzięki nowoczesnemu przewężeniu rdzenia.
- Niższe siły skrawania oraz doskonałe samocentrowanie.
- Dostępny każdy niestandardowy wymiar.



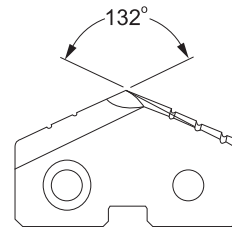
Series Seria	Diameter Średnica			Thick Grubość	EDP		
	Inch (inch) Calowy (cale)	Metric (mm) Metryczny (mm)	Decimal (inch) Dziesiętny (cale)		TiN	TiCN	TiAlN
3	1-13/32"	35.72	1.462"	6.4 (1/4")	HRKS405126	HRKS410126	HRKS415126
		36.	1.4173"		HRKS455360	HRKS460360	HRKS465360
	1-7/16"	36.51	1.4375"		HRKS405128	HRKS410128	HRKS415128
		37.	1.4567"		HRKS455370	HRKS460370	HRKS465370
	1-15/32"	37.31	1.4688"		HRKS405130	HRKS410130	HRKS415130
		38.	1.4961"		HRKS455380	HRKS460380	HRKS465380
	1-1/2"	38.1	1.5"		HRKS405132	HRKS410132	HRKS415132
	1-17/32"	38.89	1.5312"		HRKS405134	HRKS410134	HRKS415134
		39.	1.5354"		HRKS455390	HRKS460390	HRKS465390
	1-9/16"	39.69	1.5625"		HRKS405136	HRKS410136	HRKS415136
		4.	1.5748"		HRKS455400	HRKS460400	HRKS465400
	1-19/32"	4.48	1.5938"		HRKS405138	HRKS410138	HRKS415138
		41.	1.6142"		HRKS455410	HRKS460410	HRKS465410
	1-5/8"	41.28	1.625"		HRKS405140	HRKS410140	HRKS415140
		42.	1.6535"		HRKS455420	HRKS460420	HRKS465420
	1-21/32"	42.7	1.6562"		HRKS405142	HRKS410142	HRKS415142
	1-11/16"	42.86	1.6875"		HRKS405144	HRKS410144	HRKS415144
		43.	1.6929"		HRKS455430	HRKS460430	HRKS465430
	1-23/32"	43.66	1.7188"		HRKS405146	HRKS410146	HRKS415146
		44.	1.7323"		HRKS455440	HRKS460440	HRKS465440
	1-3/4"	44.45	1.75"		HRKS405148	HRKS410148	HRKS415148
		45.	1.7717"		HRKS455450	HRKS460450	HRKS465450
	1-25/32"	45.24	1.7812"		HRKS405150	HRKS410150	HRKS415150
		46.	1.811"		HRKS455460	HRKS460460	HRKS465460
	1-13/16"	46.4	1.8125"		HRKS405152	HRKS410152	HRKS415152
	1-27/32"	46.83	1.8438"		HRKS405154	HRKS410154	HRKS415154
		47.	1.854"		HRKS455470	HRKS460470	HRKS465470
	1-7/8"	47.63	1.875"		HRKS405156	HRKS410156	HRKS415156

HRKS - SPADE DRILL INSERTS - SUPER HSS T15

PŁYTKI ŁOPATKOWE HRKS - SUPER HSS T15

- For use in high nickel alloys and materials over 280 Brinell.
- Improved stability and hole straightness by newly developed thinning design.
- Less thrust force and excellent self-centering.
- Any non-standard size available.

- Do obróbki stopów z wysoką zawartością niklu oraz materiałów powyżej 280 HB twardości.
- Poprawiona stabilność oraz prostoliniowość otworów dzięki nowoczesnemu przewężeniu rdzenia.
 - Mniejsze siły skrawania.
- Dostępny każdy niestandardowy wymiar.



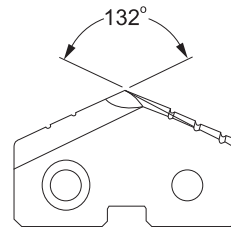
Series Seria	Diameter Średnica			Thick Grubość	EDP		
	Inch (inch) Calowy (cale)	Metric (mm) Metryczny (mm)	Decimal (inch) Dziesiętny (cale)		TiN	TiCN	TiAlN
Y		9.5	.374"	2.4 (3/32")	HRKS155095	HRKS160095	HRKS165095
	3/8"	9.53	.375"		HRKS105024	HRKS110024	HRKS115024
		9.8	.3858"		HRKS155098	HRKS160098	HRKS165098
	25/64"	9.92	.396"		HRKS105025	HRKS110025	HRKS115025
		1.	.3937"		HRKS155100	HRKS160100	HRKS165100
		1.2	.416"		HRKS155102	HRKS160102	HRKS165102
	13/32"	1.32	.462"		HRKS105026	HRKS110026	HRKS115026
		1.5	.4134"		HRKS155105	HRKS160105	HRKS165105
	27/64"	1.72	.4219"		HRKS105027	HRKS110027	HRKS115027
		1.8	.4252"		HRKS155108	HRKS160108	HRKS165108
		11.	.4331"		HRKS155110	HRKS160110	HRKS165110
Z	7/16"	11.11	.4375"	2.4 (3/32")	HRKS105028	HRKS110028	HRKS115028
		11.5	.4528"		HRKS155115	HRKS160115	HRKS165115
	29/64"	11.51	.4531"		HRKS105029	HRKS110029	HRKS115029
	15/32"	11.91	.4688"		HRKS105030	HRKS110030	HRKS115030
		12.	.4724"		HRKS155120	HRKS160120	HRKS165120
	31/64"	12.3	.4844"		HRKS105031	HRKS110031	HRKS115031
		12.5	.4921"		HRKS155125	HRKS160125	HRKS165125
	1/2"	12.7	.5"		HRKS105032	HRKS110032	HRKS115032

HRKS - SPADE DRILL INSERTS - SUPER HSS T15

PŁYTKI ŁOPATKOWE HRKS - SUPER HSS T15

- For use in high nickel alloys and materials over 280 Brinell.
- Improved stability and hole straightness by newly developed thinning design.
- Less thrust force and excellent self-centering.
- Any non-standard size available.

- Do obróbki stopów z wysoką zawartością niklu oraz materiałów powyżej 280 HB twardości.
- Poprawiona stabilność oraz prostoliniowość otworów dzięki nowoczesnemu przewężeniu rdzenia.
 - Mniejsze siły skrawania.
- Dostępny każdy niestandardowy wymiar.



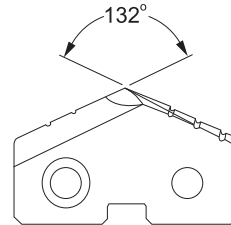
Series Seria	Diameter Średnica			Thick Grubość	EDP		
	Inch (inch) Calowy (cale)	Metric (mm) Metryczny (mm)	Decimal (inch) Dziesiętny (cale)		TiN	TiCN	TiAlN
0		13.	.5118"	3.2 (1/8")	HRKS155130	HRKS160130	HRKS165130
	33/64"	13.1	.5156"		HRKS105033	HRKS110033	HRKS115033
	17/32"	13.49	.5312"		HRKS105034	HRKS110034	HRKS115034
		13.5	.5315"		HRKS155135	HRKS160135	HRKS165135
	35/64"	13.89	.5469"		HRKS105035	HRKS110035	HRKS115035
		14.	.5512"		HRKS155140	HRKS160140	HRKS165140
	9/16"	14.29	.5625"		HRKS105036	HRKS110036	HRKS115036
		14.5	.579"		HRKS155145	HRKS160145	HRKS165145
	37/64"	14.68	.5781"		HRKS105037	HRKS110037	HRKS115037
		15.	.596"		HRKS155150	HRKS160150	HRKS165150
	19/32"	15.8	.5938"		HRKS105038	HRKS110038	HRKS115038
	39/64"	15.48	.694"		HRKS105039	HRKS110039	HRKS115039
		15.5	.612"		HRKS155155	HRKS160155	HRKS165155
	5/8"	15.88	.625"		HRKS105040	HRKS110040	HRKS115040
		16.	.6299"		HRKS155160	HRKS160160	HRKS165160
	41/64"	16.27	.646"		HRKS105041	HRKS110041	HRKS115041
		16.5	.6496"		HRKS155165	HRKS160165	HRKS165165
	21/32"	16.67	.6562"		HRKS105042	HRKS110042	HRKS115042
		17.	.6693"		HRKS155170	HRKS160170	HRKS165170
	43/64"	17.7	.6719"		HRKS105043	HRKS110043	HRKS115043
	11/16"	17.46	.6875"		HRKS105044	HRKS110044	HRKS115044
		17.5	.689"		HRKS155175	HRKS160175	HRKS165175

HRKS - SPADE DRILL INSERTS - SUPER HSS T15

PŁYTKI ŁOPATKOWE HRKS - SUPER HSS T15

- For use in high nickel alloys and materials over 280 Brinell.
- Improved stability and hole straightness by newly developed thinning design.
- Less thrust force and excellent self-centering.
- Any non-standard size available.

- Do obróbki stopów z wysoką zawartością niklu oraz materiałów powyżej 280 HB twardości.
- Poprawiona stabilność oraz prostoliniowość otworów dzięki nowoczesnemu przewężeniu rdzenia.
 - Mniejsze siły skrawania.
- Dostępny każdy niestandardowy wymiar.



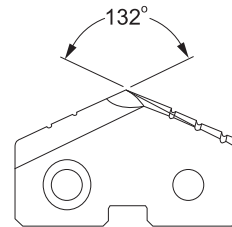
Series Seria	Diameter Średnica			Thick Grubość	EDP		
	Inch (inch) Calowy (cale)	Metric (mm) Metryczny (mm)	Decimal (inch) Dziesiętny (cale)		TiN	TiCN	TiAlN
1	45/64"	17.86	.731"	4. (5/32")	HRKS105045	HRKS110045	HRKS115045
		18.	.787"		HRKS155180	HRKS160180	HRKS165180
	23/32"	18.26	.7188"		HRKS105046	HRKS110046	HRKS115046
		18.5	.7283"		HRKS155185	HRKS160185	HRKS165185
	47/64"	18.65	.7344"		HRKS105047	HRKS110047	HRKS115047
		19.	.748"		HRKS155190	HRKS160190	HRKS165190
	3/4"	19.5	.75"		HRKS105048	HRKS110048	HRKS115048
	49/64"	19.45	.7656"		HRKS105049	HRKS110049	HRKS115049
		19.5	.7677"		HRKS155195	HRKS160195	HRKS165195
	25/32"	19.84	.7812"		HRKS105050	HRKS110050	HRKS115050
		2.	.7874"		HRKS155200	HRKS160200	HRKS165200
	51/64"	2.24	.7969"		HRKS105051	HRKS110051	HRKS115051
		2.5	.871"		HRKS155205	HRKS160205	HRKS165205
	13/16"	2.64	.8125"		HRKS105052	HRKS110052	HRKS115052
		21.	.8268"		HRKS155210	HRKS160210	HRKS165210
	27/32"	21.43	.8438"		HRKS105054	HRKS110054	HRKS115054
	55/64"	21.83	.8594"		HRKS105055	HRKS110055	HRKS115055
		22.	.8661"		HRKS155220	HRKS160220	HRKS165220
	7/8"	22.23	.875"		HRKS105056	HRKS110056	HRKS115056
	57/64"	22.62	.896"		HRKS105057	HRKS110057	HRKS115057
		23.	.955"		HRKS155230	HRKS160230	HRKS165230
	29/32"	23.2	.962"		HRKS105058	HRKS110058	HRKS115058
	59/64"	23.42	.9219"		HRKS105059	HRKS110059	HRKS115059
	15/16"	23.81	.9375"		HRKS105060	HRKS110060	HRKS115060
		24.	.9449"		HRKS155240	HRKS160240	HRKS165240

HRKS - SPADE DRILL INSERTS - SUPER HSS T15

PŁYTKI ŁOPATKOWE HRKS - SUPER HSS T15

- For use in high nickel alloys and materials over 280 Brinell.
- Improved stability and hole straightness by newly developed thinning design.
- Less thrust force and excellent self-centering.
- Any non-standard size available.

- Do obróbki stopów z wysoką zawartością niklu oraz materiałów powyżej 280 HB twardości.
- Poprawiona stabilność oraz prostoliniowość otworów dzięki nowoczesnemu przewężeniu rdzenia.
 - Mniejsze siły skrawania.
- Dostępny każdy niestandardowy wymiar.



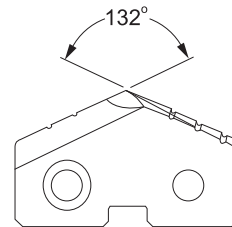
Series Seria	Diameter Średnica			Thick Grubość	EDP		
	Inch (inch) Calowy (cale)	Metric (mm) Metryczny (mm)	Decimal (inch) Dziesiętny (cale)		TiN	TiCN	TiAlN
2	31/32"	24.61	.9688"	4.8 (3/16")	HRKS105062	HRKS110062	HRKS115062
	63/64"	25.	.9843"		HRKS105063	HRKS110063	HRKS115063
	1"	25.4	1."		HRKS105100	HRKS110100	HRKS115100
	1-1/64"	25.8	1.156"		HRKS105101	HRKS110101	HRKS115101
		26.	1.236"		HRKS155260	HRKS160260	HRKS165260
	1-1/32"	26.19	1.312"		HRKS105102	HRKS110102	HRKS115102
	1-3/64"	26.59	1.469"		HRKS105103	HRKS110103	HRKS115103
	1-1/16"	26.99	1.625"		HRKS105104	HRKS110104	HRKS115104
		27.	1.63"		HRKS155270	HRKS160270	HRKS165270
	1-3/32"	27.78	1.938"		HRKS105106	HRKS110106	HRKS115106
		28.	1.124"		HRKS155280	HRKS160280	HRKS165280
	1-7/64"	28.18	1.194"		HRKS105107	HRKS110107	HRKS115107
	1-1/8"	28.58	1.125"		HRKS105108	HRKS110108	HRKS115108
		29.	1.1417"		HRKS155290	HRKS160290	HRKS165290
	1-5/32"	29.37	1.1562"		HRKS105110	HRKS110110	HRKS115110
		3.	1.1811"		HRKS155300	HRKS160300	HRKS165300
	1-3/16"	3.16	1.1875"		HRKS105112	HRKS110112	HRKS115112
	1-7/32"	3.96	1.2188"		HRKS105114	HRKS110114	HRKS115114
		31.	1.225"		HRKS155310	HRKS160310	HRKS165310
	1-1/4"	31.75	1.25"		HRKS105116	HRKS110116	HRKS115116
		32.	1.2598"		HRKS155320	HRKS160320	HRKS165320
	1-9/32"	32.54	1.2812"		HRKS105118	HRKS110118	HRKS115118
		33.	1.2992"		HRKS155330	HRKS160330	HRKS165330
	1-5/16"	33.34	1.3125"		HRKS105120	HRKS110120	HRKS115120
		34.	1.3386"		HRKS155340	HRKS160340	HRKS165340
	1-11/32"	34.13	1.3438"		HRKS105122	HRKS110122	HRKS115122
	1-3/8"	34.93	1.375"		HRKS105124	HRKS110124	HRKS115124
		35.	1.378"		HRKS155350	HRKS160350	HRKS165350

HRKS - SPADE DRILL INSERTS - SUPER HSS T15

PŁYTKI ŁOPATKOWE HRKS - SUPER HSS T15

- For use in high nickel alloys and materials over 280 Brinell.
- Improved stability and hole straightness by newly developed thinning design.
- Less thrust force and excellent self-centering.
- Any non-standard size available.

- Do obróbki stopów z wysoką zawartością niklu oraz materiałów powyżej 280 HB twardości.
- Poprawiona stabilność oraz prostoliniowość otworów dzięki nowoczesnemu przewężeniu rdzenia.
 - Mniejsze siły skrawania.
- Dostępny każdy niestandardowy wymiar.



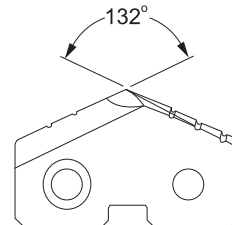
Series Seria	Diameter Średnica			Thick Grubość	EDP		
	Inch (inch) Calowy (cale)	Metric (mm) Metryczny (mm)	Decimal (inch) Dziesiętny (cale)		TiN	TiCN	TiAlN
3	1-13/32"	35.72	1.462"	6.4 (1/4")	HRKS105126	HRKS110126	HRKS115126
		36.	1.4173"		HRKS155360	HRKS160360	HRKS165360
	1-7/16"	36.51	1.4375"		HRKS105128	HRKS110128	HRKS115128
		37.	1.4567"		HRKS155370	HRKS160370	HRKS165370
	1-15/32"	37.31	1.4688"		HRKS105130	HRKS110130	HRKS115130
		38.	1.4961"		HRKS155380	HRKS160380	HRKS165380
	1-1/2"	38.1	1.5"		HRKS105132	HRKS110132	HRKS115132
	1-17/32"	38.89	1.5312"		HRKS105134	HRKS110134	HRKS115134
		39.	1.5354"		HRKS155390	HRKS160390	HRKS165390
	1-9/16"	39.69	1.5625"		HRKS105136	HRKS110136	HRKS115136
		4.	1.5748"		HRKS155400	HRKS160400	HRKS165400
	1-19/32"	4.48	1.5938"		HRKS105138	HRKS110138	HRKS115138
		41.	1.6142"		HRKS155410	HRKS160410	HRKS165410
	1-5/8"	41.28	1.625"		HRKS105140	HRKS110140	HRKS115140
		42.	1.6535"		HRKS155420	HRKS160420	HRKS165420
	1-21/32"	42.7	1.6562"		HRKS105142	HRKS110142	HRKS115142
	1-11/16"	42.86	1.6875"		HRKS105144	HRKS110144	HRKS115144
		43.	1.6929"		HRKS155430	HRKS160430	HRKS165430
	1-23/32"	43.66	1.7188"		HRKS105146	HRKS110146	HRKS115146
		44.	1.7323"		HRKS155440	HRKS160440	HRKS165440
	1-3/4"	44.45	1.75"		HRKS105148	HRKS110148	HRKS115148
		45.	1.7717"		HRKS155450	HRKS160450	HRKS165450
	1-25/32"	45.24	1.7812"		HRKS105150	HRKS110150	HRKS115150
		46.	1.811"		HRKS155460	HRKS160460	HRKS165460
	1-13/16"	46.4	1.8125"		HRKS105152	HRKS110152	HRKS115152
	1-27/32"	46.83	1.8438"		HRKS105154	HRKS110154	HRKS115154
		47.	1.854"		HRKS155470	HRKS160470	HRKS165470
	1-7/8"	47.63	1.875"		HRKS105156	HRKS110156	HRKS115156

HRKS -SPADE DRILL INSERTS - SUPER HSS M48

PŁYTKI ŁOPATKOWE HRKS - SUPER HSS M48

- For use in high temperature alloys and materials with 350~500 Brinell.
- Improved stability and hole straightness by newly developed thinning design.
- Less thrust force and excellent self-centering.
- Any non-standard size available.

- Do obróbki stopów żaroodpornych oraz materiałów o twardości 350~500 HB.
- Poprawiona stabilność oraz prostoliniowość otworów dzięki nowoczesnemu przewężeniu rdzenia.
- Niższe siły skrawania oraz doskonałe samocentrowanie.
- Dostępny każdy niestandardowy wymiar.



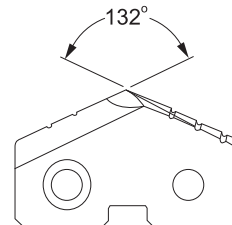
Series Seria	Diameter Średnica			Thick Grubość	EDP		
	Inch (inch) Calowy (cale)	Metric (mm) Metryczny (mm)	Decimal (inch) Dziesiętny (cale)		TiN	TiCN	TiAlN
Y		9.5	.374"	2.4 (3/32")	HRKS555095	HRKS560095	HRKS565095
	3/8"	9.53	.375"		HRKS505024	HRKS510024	HRKS515024
		9.8	.3858"		HRKS555098	HRKS560098	HRKS565098
	25/64"	9.92	.396"		HRKS505025	HRKS510025	HRKS515025
		1.	.3937"		HRKS555100	HRKS560100	HRKS565100
		1.2	.416"		HRKS555102	HRKS560102	HRKS565102
	13/32"	1.32	.462"		HRKS505026	HRKS510026	HRKS515026
		1.5	.4134"		HRKS555105	HRKS560105	HRKS565105
	27/64"	1.72	.4219"		HRKS505027	HRKS510027	HRKS515027
		1.8	.4252"		HRKS555108	HRKS560108	HRKS565108
Z		11.	.4331"	2.4 (3/32")	HRKS555110	HRKS560110	HRKS565110
	7/16"	11.11	.4375"		HRKS505028	HRKS510028	HRKS515028
		11.5	.4528"		HRKS555115	HRKS560115	HRKS565115
	29/64"	11.51	.4531"		HRKS505029	HRKS510029	HRKS515029
	15/32"	11.91	.4688"		HRKS505030	HRKS510030	HRKS515030
		12.	.4724"		HRKS555120	HRKS560120	HRKS565120
	31/64"	12.3	.4844"		HRKS505031	HRKS510031	HRKS515031
		12.5	.4921"		HRKS555125	HRKS560125	HRKS565125
O	1/2"	12.7	.5"	3.2 (1/8")	HRKS505032	HRKS510032	HRKS515032
		13.	.5118"		HRKS555130	HRKS560130	HRKS565130
	33/64"	13.1	.5156"		HRKS505033	HRKS510033	HRKS515033
	17/32"	13.49	.5312"		HRKS505034	HRKS510034	HRKS515034
		13.5	.5315"		HRKS555135	HRKS560135	HRKS565135
	35/64"	13.89	.5469"		HRKS505035	HRKS510035	HRKS515035
		14.	.5512"		HRKS555140	HRKS560140	HRKS565140
	9/16"	14.29	.5625"		HRKS505036	HRKS510036	HRKS515036
		14.5	.579"		HRKS555145	HRKS560145	HRKS565145
	37/64"	14.68	.5781"		HRKS505037	HRKS510037	HRKS515037
		15.	.596"		HRKS555150	HRKS560150	HRKS565150
	19/32"	15.8	.5938"		HRKS505038	HRKS510038	HRKS515038
	39/64"	15.48	.694"		HRKS505039	HRKS510039	HRKS515039

HRKS -SPADE DRILL INSERTS - SUPER HSS M48

PŁYTKI ŁOPATKOWE HRKS - SUPER HSS M48

- For use in high temperature alloys and materials with 350~500 Brinell.
- Improved stability and hole straightness by newly developed thinning design.
- Less thrust force and excellent self-centering.
- Any non-standard size available.

- Do obróbki stopów żaroodpornych oraz materiałów o twardości 350~500 HB.
- Poprawiona stabilność oraz prostoliniowość otworów dzięki nowoczesnemu przewężeniu rdzenia.
- Niższe siły skrawania oraz doskonałe samocentrowanie.
- Dostępny każdy niestandardowy wymiar.



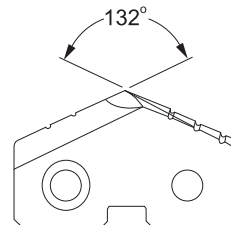
Series Seria	Diameter Średnica			Thick Grubość	EDP		
	Inch (inch) Calowy (cale)	Metric (mm) Metryczny (mm)	Decimal (inch) Dziesiętny (cale)		TiN	TiCN	TiAlN
0		15.5	.612"	3.2 (1/8")	HRKS555155	HRKS560155	HRKS565155
	5/8"	15.88	.625"		HRKS505040	HRKS510040	HRKS515040
		16.	.6299"		HRKS555160	HRKS560160	HRKS565160
	41/64"	16.27	.646"		HRKS505041	HRKS510041	HRKS515041
		16.5	.6496"		HRKS555165	HRKS560165	HRKS565165
	21/32"	16.67	.6562"		HRKS505042	HRKS510042	HRKS515042
		17.	.6693"		HRKS555170	HRKS560170	HRKS565170
	43/64"	17.7	.6719"		HRKS505043	HRKS510043	HRKS515043
	11/16"	17.46	.6875"		HRKS505044	HRKS510044	HRKS515044
		17.5	.689"		HRKS555175	HRKS560175	HRKS565175
1	45/64"	17.86	.731"	4. (5/32")	HRKS505045	HRKS510045	HRKS515045
		18.	.787"		HRKS555180	HRKS560180	HRKS565180
	23/32"	18.26	.7188"		HRKS505046	HRKS510046	HRKS515046
		18.5	.7283"		HRKS555185	HRKS560185	HRKS565185
	47/64"	18.65	.7344"		HRKS505047	HRKS510047	HRKS515047
		19.	.748"		HRKS555190	HRKS560190	HRKS565190
	3/4"	19.5	.75"		HRKS505048	HRKS510048	HRKS515048
	49/64"	19.45	.7656"		HRKS505049	HRKS510049	HRKS515049
		19.5	.7677"		HRKS555195	HRKS560195	HRKS565195
	25/32"	19.84	.7812"		HRKS505050	HRKS510050	HRKS515050
		2.	.7874"		HRKS555200	HRKS560200	HRKS565200
	51/64"	2.24	.7969"		HRKS505051	HRKS510051	HRKS515051
		2.5	.871"		HRKS555205	HRKS560205	HRKS565205
	13/16"	2.64	.8125"		HRKS505052	HRKS510052	HRKS515052
		21.	.8268"		HRKS555210	HRKS560210	HRKS565210
	27/32"	21.43	.8438"		HRKS505054	HRKS510054	HRKS515054
	55/64"	21.83	.8594"		HRKS505055	HRKS510055	HRKS565055
		22.	.8661"		HRKS555220	HRKS560220	HRKS565220
	7/8"	22.23	.875"		HRKS505056	HRKS510056	HRKS515056
	57/64"	22.62	.896"		HRKS505057	HRKS510057	HRKS515057
		23.	.955"		HRKS555230	HRKS560230	HRKS565230

HRKS -SPADE DRILL INSERTS - SUPER HSS M48

PŁYTKI ŁOPATKOWE HRKS - SUPER HSS M48

- For use in high temperature alloys and materials with 350~500 Brinell.
- Improved stability and hole straightness by newly developed thinning design.
- Less thrust force and excellent self-centering.
- Any non-standard size available.

- Do obróbki stopów żaroodpornych oraz materiałów o twardości 350~500 HB.
- Poprawiona stabilność oraz prostoliniowość otworów dzięki nowoczesnemu przewężeniu rdzenia.
- Niższe siły skrawania oraz doskonałe samocentrowanie.
- Dostępny każdy niestandardowy wymiar.



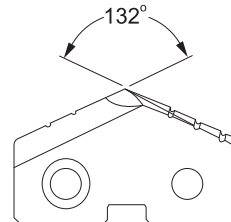
Series Seria	Diameter Średnica			Thick Grubość	EDP		
	Inch (inch) Calowy (cale)	Metric (mm) Metryczny (mm)	Decimal (inch) Dziesiętny (cale)		TiN	TiCN	TiAlN
1	29/32"	23.2	.962"	4. (5/32")	HRKS505058	HRKS510058	HRKS515058
	59/64"	23.42	.9219"		HRKS505059	HRKS510059	HRKS515059
	15/16"	23.81	.9375"		HRKS505060	HRKS510060	HRKS515060
		24.	.9449"		HRKS555240	HRKS560240	HRKS565240
2	31/32"	24.61	.9688"	4.8 (3/16")	HRKS505062	HRKS510062	HRKS515062
	63/64"	25.	.9843"		HRKS505063	HRKS510063	HRKS515063
	1"	25.4	1."		HRKS505100	HRKS510100	HRKS515100
	1-1/64"	25.8	1.156"		HRKS505101	HRKS510101	HRKS515101
		26.	1.236"		HRKS555260	HRKS560260	HRKS565260
	1-1/32"	26.19	1.312"		HRKS505102	HRKS510102	HRKS515102
	1-3/64"	26.59	1.469"		HRKS505103	HRKS510103	HRKS515103
	1-1/16"	26.99	1.625"		HRKS505104	HRKS510104	HRKS515104
		27.	1.63"		HRKS555270	HRKS560270	HRKS565270
	1-3/32"	27.78	1.938"		HRKS505106	HRKS510106	HRKS515106
		28.	1.124"		HRKS555280	HRKS560280	HRKS565280
	1-7/64"	28.18	1.194"		HRKS505107	HRKS510107	HRKS515107
	1-1/8"	28.58	1.125"		HRKS505108	HRKS510108	HRKS515108
		29.	1.1417"		HRKS555290	HRKS560290	HRKS565290
	1-5/32"	29.37	1.1562"		HRKS505110	HRKS510110	HRKS515110
		3.	1.1811"		HRKS555300	HRKS560300	HRKS565300
	1-3/16"	3.16	1.1875"		HRKS505112	HRKS510112	HRKS515112
	1-7/32"	3.96	1.2188"		HRKS505114	HRKS510114	HRKS515114
		31.	1.225"		HRKS555310	HRKS560310	HRKS565310
	1-1/4"	31.75	1.25"		HRKS505116	HRKS510116	HRKS515116
		32.	1.2598"		HRKS555320	HRKS560320	HRKS565320
	1-9/32"	32.54	1.2812"		HRKS505118	HRKS510118	HRKS515118

HRKS - SPADE DRILL INSERTS - SUPER HSS M48

PŁYTKI ŁOPATKOWE HRKS - SUPER HSS M48

- For use in high temperature alloys and materials with 350~500 Brinell.
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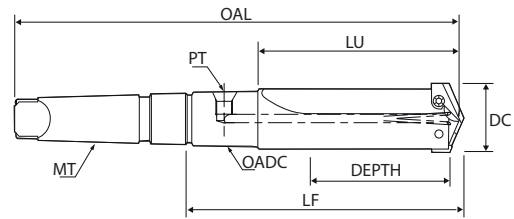
- Do obróbki stopów żaroodpornych oraz materiałów o twardości 350~500 HB.
- Poprawiona stabilność oraz prostoliniowość otworów dzięki nowoczesnemu przewężeniu rdzenia.
- Niższe siły skrawania oraz doskonałe samocentrowanie.
- Dostępny każdy niestandardowy wymiar.



Series Seria	Diameter Średnica			Thick Grubość	EDP		
	Inch (inch) Calowy (cale)	Metric (mm) Metryczny (mm)	Decimal (inch) Dziesiętny (cale)		TiN	TiCN	TiAlN
2		33.	1.2992"	4.8 (3/16")	HRKS555330	HRKS560330	HRKS565330
	1-5/16"	33.34	1.3125"		HRKS505120	HRKS510120	HRKS515120
		34.	1.3386"		HRKS555340	HRKS560340	HRKS565340
	1-11/32"	34.13	1.3438"		HRKS505122	HRKS510122	HRKS515122
	1-3/8"	34.93	1.375"		HRKS505124	HRKS510124	HRKS515124
		35.	1.378"		HRKS555350	HRKS560350	HRKS565350

TAPER SHANK HOLDERS CHWYTY MORSE'A

SHORT LENGTH - Straight flute (inch)
KRÓTKIE - Rowki proste (calowe)

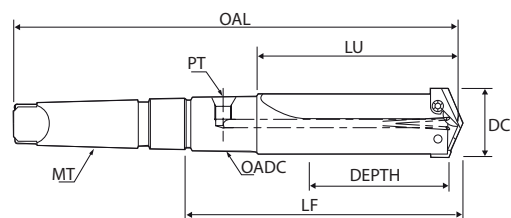


Series Seria	EDP	DC	DEPTH	LU	LF	OAL	MT	Pipe Tap Gwint Rurowy	RCA PDC
Y	TSM024027620	3/8" ~ 27/64"	1-1/4"	2-1/32"	3-15/32"	6-5/16"	#2	1/16"	OA110048
Z	TSM028032620	7/16"~1/2"	1-1/4"	2-1/32"	3-15/32"	6-5/16"	#2	1/16"	OA110048
0	TSM033044630	33/64"~11/16"	1-3/8"	2-3/16"	3-41/64"	6-15/32"	#2	1/16"	OA110048
0.5	TSM039044630	39/64"~11/16"	1-3/8"	2-3/16"	3-41/64"	6-15/32"	#2	1/16"	OA110048
1	TSM045060910	45/64"~15/16"	2-3/4"	3-7/8"	5-39/64"	9-5/32"	#3	1/8"	OA110100
	TSM045060A10	45/64"~15/16"	2-3/4"	3-7/8"	5-43/64"	10-5/32"	#4	1/8"	OA110100
1.5	TSM055060910	55/64"~15/16"	2-3/4"	3-7/8"	5-39/64"	9-5/32"	#3	1/8"	OA110100
	TSM055060A10	55/64"~15/16"	2-3/4"	3-7/8"	5-43/64"	10-5/32"	#4	1/8"	OA110100
2	TSM062124950	31/32" ~ 1-3/8"	3-3/8"	4-1/2"	6-15/64"	9-25/32"	#3	1/8"	OA110100
	TSM062124A50	31/32" ~ 1-3/8"	3-3/8"	4-1/2"	6-19/64"	10-25/32"	#4	1/8"	OA110100
2.5	TSM112124950	1-3/16" ~ 1-3/8"	3-3/8"	4-1/2"	6-15/64"	9-25/32"	#3	1/8"	OA110100
	TSM112124B04	1-3/16" ~ 1-3/8"	3-3/8"	4-1/2"	6-37/64"	11-1/16"	#4	1/4"	OA110116
3	TSM12G15GC3G	1-13/32" ~ 1-7/8"	4-3/4"	6"	8-1/8"	12-9/16"	#4	1/4"	OA110116
	TSM12G15GD52	1-13/32" ~ 1-7/8"	4-3/4"	6"	8-1/8"	13-13/16"	#5	1/4"	OA110148
4	TSM158236D04	1-29/32" ~ 2-9/16"	5-1/8"	6-1/2"	8-5/8"	13-1/16"	#4	1/4"	OA110116
	TSM158236E20	1-29/32" ~ 2-9/16"	5-1/8"	6-1/2"	8-5/8"	14-5/16"	#5	1/4"	OA110148
5	TSM232332G60	2-1/2" ~ 3-1/2"	6-3/4"	8-1/2"	11-5/16"	16-15/16"	#5	1/2"	OA110216
7	TSM334432H20	3-17/32" ~ 4-1/2"	6-3/4"	8-7/8"	11-11/16"	17-5/16"	#5	1/2"	OA110216
1	TSG045060B10	45/64"-15/16"	4-3/4"	5-7/8"	7-39/64"	11-5/32"	#3	1/8"	OA110100
1.5	TSG055060B10	55/64"-15/16"	4-3/4"	5-7/8"	7-39/64"	11-5/32"	#3	1/8"	OA110100
2	TSG062124C50	31/32"-1-3/8"	5-3/8"	6-1/2"	8-19/64"	12-25/32"	#4	1/8"	OA110100
2.5	TSG112124D04	1-3/16"-1-3/8"	5-3/8"	6-1/2"	8-37/64"	13-1/16"	#4	1/4"	OA110116
3	TSG12G15GE20	1-13/32"-1-7/8"	6-1/2"	7-3/4"	9-7/8"	14-5/16"	#4	1/4"	OA110116

RCA - Rotary coolant adapter
PDC - Pierścień doprowadzenia chłodziwa

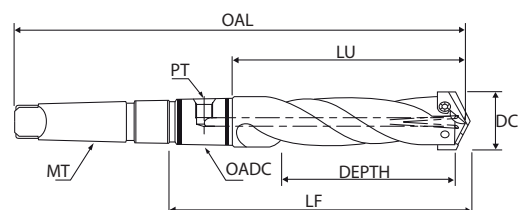
TAPER SHANK HOLDERS CHWYTY MORSE'A

INTERMEDIATE LENGTH - Straight flute (inch)
ŚREDNIA DŁUGOŚĆ - Rowki proste (calowe)



Series Seria	EDP	DC	DEPTH	LU	LF	OAL	MT	Pipe Tap Gwint Rurowy	RCA PDC
1	TSG045060B10	45/64"-15/16"	4-3/4"	5-7/8"	7-39/64"	11-5/32"	#3	1/8"	OA110100
1.5	TSG055060B10	55/64"-15/16"	4-3/4"	5-7/8"	7-39/64"	11-5/32"	#3	1/8"	OA110100
2	TSG062124C50	31/32"-1-3/8"	5-3/8"	6-1/2"	8-19/64"	12-25/32"	#4	1/8"	OA110100
2.5	TSG112124D04	1-3/16"-1-3/8"	5-3/8"	6-1/2"	8-37/64"	13-1/16"	#4	1/4"	OA110116
3	TSG12G15GE20	1-13/32"-1-7/8"	6-1/2"	7-3/4"	9-7/8"	14-5/16"	#4	1/4"	OA110116

INTERMEDIATE LENGTH - Spiral flute (inch)
ŚREDNIA DŁUGOŚĆ - Rowki skrętne (calowe)

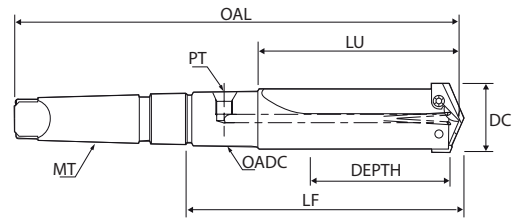


Series Seria	EDP	DC	DEPTH	LU	LF	OAL	MT	Pipe Tap Gwint Rurowy	RCA PDC
1	TSC045060B10	45/64"-15/16"	4-3/4"	5-7/8"	7-39/64"	11-5/32"	#3	1/8"	OA110100
1.5	TSC055060B10	55/64"-15/16"	4-3/4"	5-7/8"	7-39/64"	11-5/32"	#3	1/8"	OA110100
2	TSC062124C50	31/32"-1-3/8"	5-3/8"	6-1/2"	8-19/64"	12-25/32"	#4	1/8"	OA110100
2.5	TSC112124D04	1-3/16"-1-3/8"	5-3/8"	6-1/2"	8-37/64"	13-1/16"	#4	1/4"	OA110116

RCA - Rotary coolant adapter
PDC - Pierścień doprowadzenia chłodziwa

TAPER SHANK HOLDERS CHWYTY MORSE'A

STANDARD LENGTH - Straight flute (inch)
STANDARDOWE - Rowki proste (calowe)

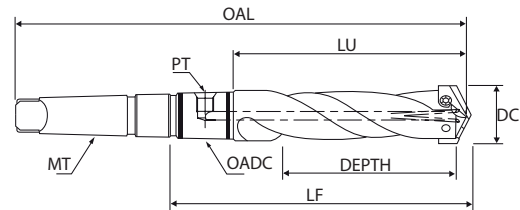


Series Seria	EDP	DC	DEPTH	LU	LF	OAL	MT	Pipe Tap Gwint Rurowy	RCA PDC
Y	TSH024027728	3/8"~27/64"	2-3/8"	3-5/32"	4-19/32"	7-7/16"	#2	1/16"	OA110048
Z	TSH028032728	7/16" -1/2"	2-3/8"	3-5/32"	4-19/32"	7-7/16"	#2	1/16"	OA110048
0	TSH033044738	33/64"-11/16"	2-1/2"	3-5/16"	4-49/64"	7-19/32"	#2	1/16"	OA110048
0.5	TSH039044738	39/64"-11/16"	2-1/2"	3-5/16"	4-49/64"	7-19/32"	#2	1/16"	OA110048
1	TSH045060D10	45/64"-15/16"	6-3/4"	7-7/8"	9-39/64"	13-5/32"	#3	1/8"	OA110100
	TSH045060E10	45/64"-15/16"	6-3/4"	7-7/8"	9-43/64"	14-5/32"	#4	1/8"	OA110100
1.5	TSH055060D10	55/64"-15/16"	6-3/4"	7-7/8"	9-39/64"	13-5/32"	#3	1/8"	OA110100
	TSH055060E10	55/64"-15/16"	6-3/4"	7-7/8"	9-43/64"	14-5/32"	#4	1/8"	OA110100
2	TSH062124D50	31/32"-1-3/8"	7-3/8"	8-1/2"	10-15/64"	13-25/32"	#3	1/8"	OA110100
	TSH062124E50	31/32"-1-3/8"	7-3/8"	8-1/2"	10-19/64"	14-25/32"	#4	1/8"	OA110100
2.5	TSH112124D50	1-3/16"-1-3/8"	7-3/8"	8-1/2"	10-15/64"	13-25/32"	#3	1/8"	OA110100
	TSH112124F04	1-3/16"-1-3/8"	7-3/8"	8-1/2"	10-37/64"	15-1/16"	#4	1/4"	OA110116
3	TSH12G15GG04	1-13/32"-1-7/8"	8-1/4"	9-1/2"	11-5/8"	16-1/16"	#4	1/4"	OA110116
	TSH12G15GH20	1-13/32"-1-7/8"	8-1/4"	9-1/2"	11-5/8"	17-5/16"	#5	1/4"	OA110148
4	TSH158236H04	1-29/32"-2-9/16"	9-1/8"	10-1/2"	12-5/8"	17-1/16"	#4	1/4"	OA110116
	TSH158236I20	1-29/32"-2-9/16"	9-1/8"	10-1/2"	12-5/8"	18-5/16"	#5	1/4"	OA110148
5	TSH232332K60	2-1/2"-3-1/2"	103/4"	12-1/2"	15-5/16"	20-15/16"	#5	1/2"	OA110216
7	TSH334432L20	3-17/32"-4-1/2"	103/4"	12-7/8"	15-11/16"	21-5/16"	#5	1/2"	OA110216

RCA - Rotary coolant adapter
PDC - Pierścień doprowadzenia chłodziwa

TAPER SHANK HOLDERS CHWYTY MORSE'A

STANDARD LENGTH - Spiral flute (inch)
STANDARDOWE - Rowki skrętne (calowe)



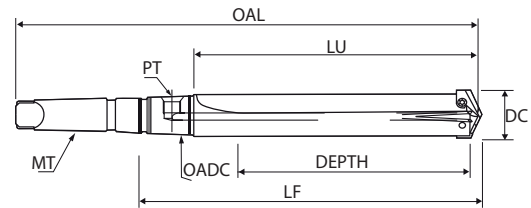
Series Seria	EDP	DC	DEPTH	LU	LF	OAL	MT	Pipe Tap Gwint Rurowy	RCA PDC
Y	TSD024027728	3/8"-27/64"	2-3/8"	3-5/32"	4-19/32"	7-7/16"	#2	1/16"	OA110048
Z	TSD028032728	7/16"-1/2"	2-3/8"	3-5/32"	4-19/32"	7-7/16"	#2	1/16"	OA110048
0	TSD033044738	33/64"-11/16"	2-1/2"	3-5/16"	4-49/64"	7-19/32"	#2	1/16"	OA110048
0.5	TSD039044738	39/64"-11/16"	2-1/2"	3-5/16"	4-49/64"	7-19/32"	#2	1/16"	OA110048
1	TSD045060D10	45/64"-15/16"	6-3/4"	7-7/8"	9-39/64"	13-5/32"	#3	1/8"	OA110100
	TSD045060E10	45/64"-15/16"	6-3/4"	7-7/8"	9-43/64"	14-5/32"	#4	1/8"	OA110100
1.5	TSD055060D10	55/64"-15/16"	6-3/4"	7-7/8"	9-39/64"	13-5/32"	#3	1/8"	OA110100
	TSD055060E10	55/64"-15/16"	6-3/4"	7-7/8"	9-43/64"	14-5/32"	#4	1/8"	OA110100
2	TSD062124D50	31/32"-1-3/8"	7-3/8"	8-1/2"	10-15/64"	13-25/32"	#3	1/8"	OA110100
	TSD062124E50	31/32"-1-3/8"	7-3/8"	8-1/2"	10-19/64"	14-25/32"	#4	1/8"	OA110100
2.5	TSD112124D50	1-3/16"-1-3/8"	7-3/8"	8-1/2"	10-15/64"	13-25/32"	#3	1/8"	OA110100
	TSD112124F04	1-3/16"-1-3/8"	7-3/8"	8-1/2"	10-37/64"	15-1/16"	#4	1/4"	OA110116

RCA - Rotary coolant adapter

PDC - Pierścień doprowadzenia chłodziwa

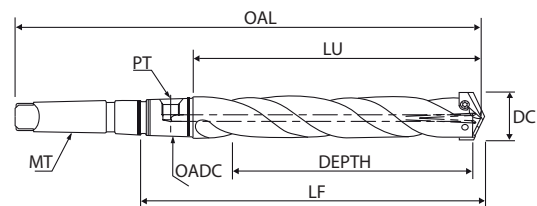
TAPER SHANK HOLDERS CHWYTY MORSE'A

EXTENDED LENGTH - Straight flute (inch)
DŁUGIE - Rowki proste (calowe)



Series Seria	EDP	DC	DEPTH	LU	LF	OAL	MT	Pipe Tap Gwint Rurowy	RCA PDC
Y	TSF024027928	3/8"-27/64"	4-3/8"	5-5/32"	6-19/32"	9-7/16"	#2	1/16"	OA110048
Z	TSF028032928	7/16" - 1/2"	4-3/8"	5-5/32"	6-19/32"	9-7/16"	#2	1/16"	OA110048
0	TSF033044938	33/64"-11/16"	4-1/2"	5-5/16"	6-49/64"	9-19/32"	#2	1/16"	OA110048
0.5	TSF039044938	39/64"-11/16"	4-1/2"	5-5/16"	6-49/64"	9-19/32"	#2	1/16"	OA110048
1	TSF045060H10	45/64"-15/16"	10-3/4"	11-7/8"	13-39/64"	17-5/32"	#3	1/8"	OA110100
1.5	TSF055060H10	55/64"-15/16"	10-3/4"	11-7/8"	13-39/64"	17-5/32"	#3	1/8"	OA110100
2	TSF062124I50	31/32"-1-3/8"	11-3/8"	12-1/2"	14-15/64"	18-25/32"	#4	1/8"	OA110100
2.5	TSF112124S04	1-3/16"-1-3/8"	11-3/8"	12-1/2"	14-37/64"	19-1/16"	#4	1/4"	OA110116
3	TSF12G15GL3G	1-13/32"-1-7/8"	13-3/4"	15"	17-1/8"	21-9/16"	#4	1/4"	OA110116
4	TSF158236P52	1-29/32"-2-9/16"	16-5/8"	18"	20-1/8"	25-13/16"	#5	1/4"	OA110148
5	TSF232332S28	2-1/2"-3-1/2"	18-1/4"	20"	22-13/16"	28-7/16"	#5	1/2"	OA110216
7	TSF334432W28	3-17/32"-4-1/2"	21-7/8"	24"	26-13/16"	32-7/16"	#5	1/2"	OA110216

INTERMEDIATE LENGTH - Spiral flute (inch)
DŁUGIE - Rowki skrętnie (calowe)

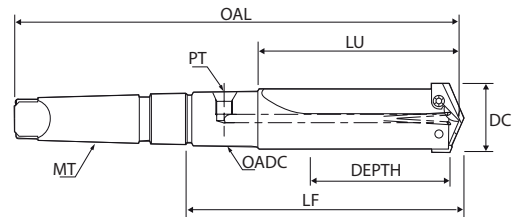


Series Seria	EDP	DC	DEPTH	LU	LF	OAL	MT	Pipe Tap Gwint Rurowy	RCA PDC
Y	TSE024027928	3/8"-27/64"	4-3/8"	5-5/32"	6-19/32"	9-7/16"	#2	1/16"	OA110048
Z	TSE028032928	7/16"-1/2"	4-3/8"	5-5/32"	6-19/32"	9-7/16"	#2	1/16"	OA110048
0	TSE033044938	33/64"-11/16"	4-1/2"	5-5/16"	6-49/64"	9-19/32"	#2	1/16"	OA110048
0.5	TSE039044938	39/64"-11/16"	4-1/2"	5-5/16"	6-49/64"	9-19/32"	#2	1/16"	OA110048
1	TSE045060H10	45/64"-15/16"	10-3/4"	11-7/8"	13-39/64"	17-5/32"	#3	1/8"	OA110100
1.5	TSE055060H10	55/64"-15/16"	10-3/4"	11-7/8"	13-39/64"	17-5/32"	#3	1/8"	OA110100
2	TSE062124I50	31/32"-1-3/8"	11-3/8"	12-1/2"	14-15/64"	18-25/32"	#4	1/8"	OA110100
2.5	TSE112124S04	1-3/16"-1-3/8"	11-3/8"	12-1/2"	14-37/64"	19-1/16"	#4	1/4"	OA110116

RCA - Rotary coolant adapter
PDC - Pierścień doprowadzenia chłodziwa

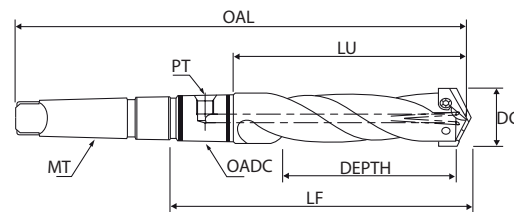
TAPER SHANK HOLDERS CHWYTY MORSE'A

SHORT LENGTH - Straight flute (metric)
KRÓTKIE - Rowki proste (metryczne)



Series Seria	EDP	DC	DEPTH	LU	LF	OAL	MT	Pipe Tap Gwint Rurowy	RCA PDC
Y	TSA095110160	9.5 ~ 11.0	31.7	51.5	88.0	160.3	#2	1/16"	OA120190
Z	TSA115125160	11.5 ~ 12.5	31.7	51.5	88.0	160.3	#2	1/16"	OA120190
0	TSA130175164	13.0 ~ 17.5	34.9	55.5	92.4	164.3	#2	1/16"	OA120190
0.5	TSA155175164	15.5 ~ 17.5	34.9	55.5	92.4	164.3	#2	1/16"	OA120190
1	TSA180240232	18.0 ~ 24.0	69.8	98.4	142.5	232.5	#3	1/8"	OA120254
1.5	TSA220240232	22.0 ~ 24.0	69.8	98.4	142.5	232.5	#3	1/8"	OA120254
2	TSA250350273	25.0 ~ 35.0	85.7	114.3	160.4	273.8	#4	1/8"	OA120254
2.5	TSA300350281	30.0 ~ 35.0	85.7	114.3	167.6	281.0	#4	1/4"	OA120317
3	TSA360470319	36.0 ~ 47.0	120.6	152.4	206.4	319.1	#4	1/4"	OA120317
4	TSA480650363	48.0 ~ 65.0	130.1	165.1	219.1	363.5	#5	1/4"	OA120444
5	TSA640880430	64.0 ~ 88.0	171.1	215.9	287.3	430.2	#5	1/2"	OA120571
7	TSA900MAX439	90.0 ~ 114.0	171.1	225.4	296.8	439.7	#5	1/2"	OA120571

INTERMEDIATE LENGTH - Spiral flute (metric)
ŚREDNIA DŁUGOŚĆ - Rowki skrętne (metryczne)

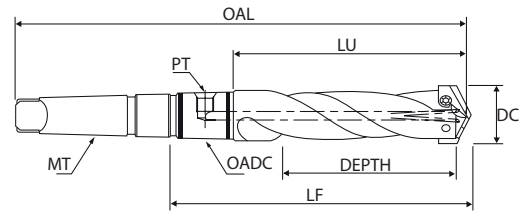


Series Seria	EDP	DC	DEPTH	LU	LF	OAL	MT	Pipe Tap Gwint Rurowy	RCA PDC
1	TSB180240283	18.0 ~ 24.0	120.7	149.2	193.3	283.3	#3	1/8"	OA120254
1.5	TSB220240283	22.0 ~ 24.0	120.7	149.2	193.3	283.3	#3	1/8"	OA120254
2	TSB250350324	25.0 ~ 35.0	136.5	165.1	211.2	324.6	#4	1/8"	OA120254
2.5	TSB300350331	30.0 ~ 35.0	136.5	165.1	218.4	331.8	#4	1/4"	OA120317
3	TSB360470363	36.0 ~ 47.0	165.1	196.9	250.9	363.6	#4	1/4"	OA120317

RCA - Rotary coolant adapter
PDC - Pierścień doprowadzenia chłodziwa

TAPER SHANK HOLDERS CHWYTY MORSE'A

STANDARD LENGTH - Spiral flute (metric)
STANDARDOWE - Rowki skrętne (metryczne)

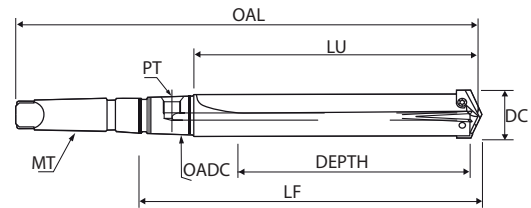


Series Seria	EDP	DC	DEPTH	LU	LF	OAL	MT	Pipe Tap Gwint Rurowy	RCA PDC
Y	TSC095110188	9.5 ~ 11.0	60.3	80.2	116.7	188.9	#2	1/16"	OA120190
Z	TSC115125188	11.5 ~ 12.5	60.3	80.2	116.7	188.9	#2	1/16"	OA120190
0	TSC130175192	13.0 ~ 17.5	63.5	84.1	121.0	192.9	#2	1/16"	OA120190
0.5	TSC155175192	15.5 ~ 17.5	63.5	84.1	121.0	192.9	#2	1/16"	OA120190
1	TSC180240334	18.0 ~ 24.0	171.5	200.0	244.1	334.2	#3	1/8"	OA120254
1.5	TSC220240334	22.0 ~ 24.0	171.5	200.0	244.1	334.2	#3	1/8"	OA120254
2	TSC250350375	25.0 ~ 35.0	187.3	215.9	262.0	375.4	#4	1/8"	OA120254
2.5	TSC300350382	30.0 ~ 35.0	187.3	215.9	269.2	382.6	#4	1/4"	OA120317
3	TSC360470408	36.0 ~ 47.0	209.5	241.3	295.3	408.0	#4	1/4"	OA120317
4	TSC480650465	48.0 ~ 65.0	231.8	266.7	320.7	465.1	#5	1/4"	OA120444
5	TSC640880531	64.0 ~ 88.0	273.1	317.5	388.9	531.8	#5	1/2"	OA120571
7	TSC900MAX541	90.0 ~ 114.0	273.1	327.0	398.5	541.3	#5	1/2"	OA120571

RCA - Rotary coolant adapter
PDC - Pierścień doprowadzenia chłodziwa

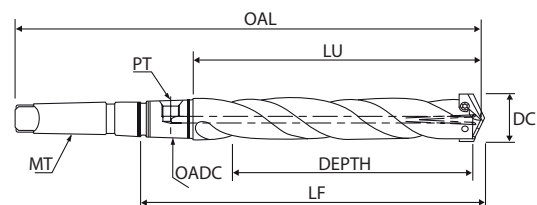
TAPER SHANK HOLDERS CHWYTY MORSE'A

EXTENDED LENGTH - Straight flute (metric)
DŁUGIE - Rowki proste (metryczne)



Series Seria	EDP	DC	DEPTH	LU	LF	OAL	MT	Pipe Tap Gwint Rurowy	RCA PDC
Y	TSD095110239	9.5 ~ 11.0	111.1	130.9	167.4	239.7	#2	1/16"	OA120190
Z	TSD115125239	11.5 ~ 12.5	111.1	130.9	167.4	239.7	#2	1/16"	OA120190
0	TSD130175243	13.0 ~ 17.5	114.3	135.0	171.8	243.7	#2	1/16"	OA120190
0.5	TSD155175243	15.5 ~ 17.5	114.3	135.0	171.8	243.7	#2	1/16"	OA120190
1	TSD180240435	18.0 ~ 24.0	273.1	301.6	345.7	435.8	#3	1/8"	OA120254
1.5	TSD220240435	22.0 ~ 24.0	273.1	301.6	345.7	435.8	#3	1/8"	OA120254
2	TSD250350477	25.0 ~ 35.0	289.0	317.5	363.6	477.0	#4	1/8"	OA120254
2.5	TSD300350484	30.0 ~ 35.0	289.0	317.5	370.8	484.2	#4	1/4"	OA120317

INTERMEDIATE LENGTH - Spiral flute (metric)
DŁUGIE - Rowki skrętne (metryczne)

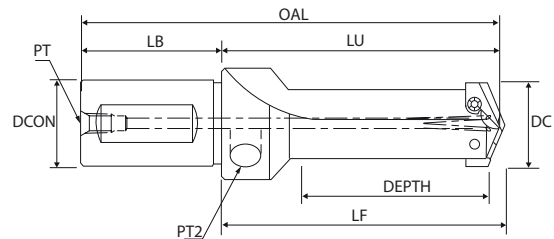


Series Seria	EDP	DC	DEPTH	LU	LF	OAL	MT	Pipe Tap Gwint Rurowy	RCA PDC
3	TSE360470547	36.0 ~ 47.0	349.3	381.0	435.0	547.7	#4	1/4"	OA120317
4	TSE480650655	48.0 ~ 65.0	422.3	457.2	511.2	655.6	#5	1/4"	OA120444
5	TSE640880722	64.0 ~ 88.0	463.6	508.0	579.4	722.3	#5	1/2"	OA120571
7	TSE900MAX823	90.0 ~ 114.0	555.6	609.6	681.1	823.9	#5	1/2"	OA120571

RCA - Rotary coolant adapter
PDC - Pierścień doprowadzenia chłodziwa

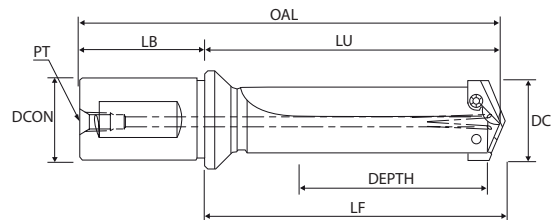
FLANGED STRAIGHT SHANK HOLDERS CHWYT WELDON

STUB LENGTH - Straight flute (inch)
BARDZO KRÓTKIE - Rowki proste (calowe)



Series Seria	EDP	DC	DEPTH	LU	LF	OAL	DCON	LB	Pipe Tap Gwint Rurowy	
									PT	PT2
Y	FSA024027348	3/8"-27/64"	3/4"	1-7/8"	1-31/32"	3-3/4"	5/8"	1-7/8"	1/16"	1/8"
Z	FSA028032343	7/16"-1/2"	3/4"	1-51/64"	1-57/64"	3-43/64"	5/8"	1-7/8"	1/16"	1/8"
0	FSA033044358	33/64"-11/16"	7/8"	1-7/8"	1-63/64"	3-29/32"	3/4"	2-1/32"	1/8"	1/8"
0.5	FSA039044358	39/64"-11/16"	7/8"	1-7/8"	1-63/64"	3-29/32"	3/4"	2-1/32"	1/8"	1/8"
1	FSA045060517	45/64"-15/16"	1-7/8"	2-63/64"	3-1/8"	5-17/64"	1"	2-9/32"	1/8"	1/8"
1.5	FSA055060549	55/64"-15/16"	2-1/4"	3-31/64"	3-5/8"	5-49/64"	1"	2-9/32"	1/8"	1/8"
2	FSA062124549	31/32"-1-3/8"	2-1/4"	3-31/64"	3-5/8"	5-49/64"	1-1/4"	2-9/32"	1/4"	1/8"
2.5	FSA112124709	1-3/16"-1-3/8"	3-5/8"	4-55/64"	5"	7-9/64"	1-1/4"	2-9/32"	1/4"	1/8"
3	FSA126156739	1-13/32"-1-7/8"	3"	4-59/64"	5-7/64"	7-39/64"	1-1/2"	2-11/16"	1/4"	1/4"

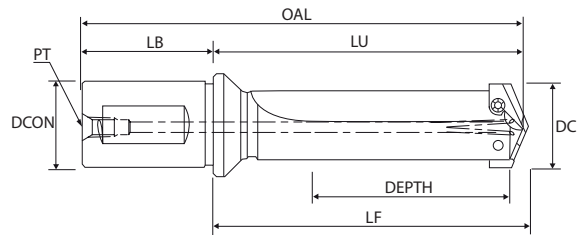
SHORT LENGTH - Spiral flute (inch)
KRÓTKIE - Rowki skrętne (calowe)



Series Seria	EDP	DC	DEPTH	LU	LF	OAL	DCON	LB	Pipe Tap Gwint Rurowy	
									PT	
Y	FSB024027428	3/8"-27/64"	1-1/4"	2-13/32"	2-1/2"	4-7/16"	3/4"	2-1/32"	1/8"	
Z	FSB028032428	7/16"-1/2"	1-1/4"	2-13/32"	2-1/2"	4-7/16"	3/4"	2-1/32"	1/8"	
0	FSB033044434	33/64"-11/16"	1-3/8"	2-1/2"	2-39/64"	4-17/32"	3/4"	2-1/32"	1/8"	
0.5	FSB039044434	39/64"-11/16"	1-3/8"	2-1/2"	2-39/64"	4-17/32"	3/4"	2-1/32"	1/8"	
1	FSB045060632	45/64"-15/16"	2-5/8"	4-7/32"	4-23/64"	6-1/2"	1"	2-9/32"	1/8"	
1.5	FSB055060632	55/64"-15/16"	2-5/8"	4-7/32"	4-23/64"	6-1/2"	1"	2-9/32"	1/8"	
2	FSB062124722	31/32"-1-3/8"	3-3/8"	5-1/16"	5-13/64"	7-11/32"	1-1/4"	2-9/32"	1/4"	
2.5	FSB112124722	1-3/16"-1-3/8"	3-3/8"	5-1/16"	5-13/64"	7-11/32"	1-1/4"	2-9/32"	1/4"	
3	FSB126156932	1-13/32"-1-7/8"	4-3/4"	6-13/16"	7"	9-1/2"	1-1/2"	2-11/16"	1/4"	
4	FSB158236948	1-29/32"-2-9/16"	5-1/8"	7-1/16"	7-1/4"	9-3/4"	1-1/2"	2-11/16"	1/4"	

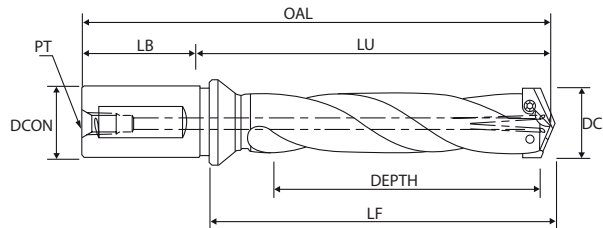
FLANGED STRAIGHT SHANK HOLDERS CHWYT WELDON

INTERMEDIATE LENGTH - Straight flute (inch)
POŚREDNIE - Rowki proste (calowe)



Series Seria	EDP	DC	DEPTH	LU	LF	OAL	DCON	LB	Pipe Tap Gwint Rurowy
									PT
1	FSG045060824	45/64'-15/16'	4-5/8"	6-3/32"	6-15/64'	8-3/8'	1'	2-9/32'	1/8"
1.5	FSG055060824	55/64"-15/16"	4-5/8"	6-3/32"	6-15/64'	8-3/8'	1'	2-9/32'	1/8"
2	FSG062124922	31/32'-1-3/8'	5-3/8"	7-1/16"	7-13/64'	9-11/32'	1-1/4'	2-9/32'	1/4"
2.5	FSG112124922	1-3/16'-1-3/8'	5-3/8"	7-1/16"	7-13/64'	9-11/32'	1-1/4'	2-9/32'	1/4"
3	FSG126156B16	1-13/32'-1-7/8'	6-1/2"	8-9/16"	8-3/4'	11-1/4'	1-1/2'	2-11/32'	1/4"

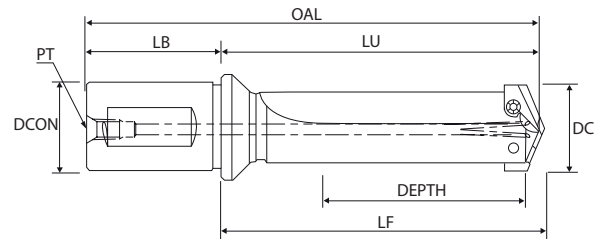
INTERMEDIATE LENGTH - Spiral flute (inch)
POŚREDNIE - Rowki skrętne (calowe)



Series Seria	EDP	DC	DEPTH	LU	LF	OAL	DCON	LB	Pipe Tap Gwint Rurowy
									PT
1	FSC045060824	45/64'-15/16'	4-5/8"	6-3/32"	6-15/64'	8-3/8'	1'	2-9/32'	1/8"
1.5	FSC055060824	55/64'-15/16'	4-5/8"	6-3/32"	6-15/64'	8-3/8'	1'	2-9/32'	1/8"
2	FSC062124922	31/32'-1-3/8'	5-3/8"	7-1/16"	7-13/64'	9-11/32'	1-1/4'	2-9/32'	1/4"
2.5	FSC112124922	1-3/16'-1-3/8'	5-3/8"	7-1/16"	7-13/64'	9-11/32'	1-1/4'	2-9/32'	1/4"
3	FSC126156B16	1-13/32'-1-7/8'	6-1/2"	8-9/16"	8-3/4'	11-1/4'	1-1/2'	2-11/32'	1/4"

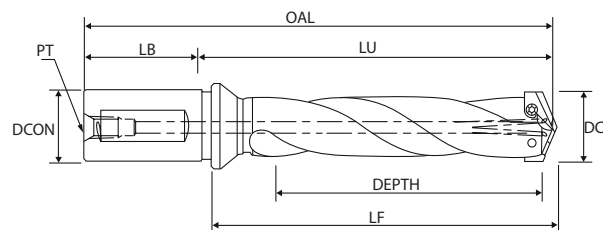
FLANGED STRAIGHT SHANK HOLDERS CHWYT WELDON

STANDARD LENGTH - Straight flute (inch)
STANDARDOWE - Rowki proste (calowe)



Series Seria	EDP	DC	DEPTH	LU	LF	OAL	DCON	LB	Pipe Tap Gwint Rurowy
									PT
Y	FSH024027536	3/8"-27/64"	2-3/8"	3-17/32"	3-5/8"	5-9/16"	3/4"	2-1/32"	1/8"
Z	FSH028032536	7/16"-1/2"	2-3/8"	3-17/32"	3-5/8"	5-9/16"	3/4"	2-1/32"	1/8"
0	FSH033044542	33/64"-11/16"	2-1/2"	3-5/8"	3-47/64"	5-21/32"	3/4"	2-1/32"	1/8"
0.5	FSH039044542	39/64"-11/16"	2-1/2"	3-5/8"	3-47/64"	5-21/32"	3/4"	2-1/32"	1/8"
1	FSH045060A24	45/64"-15/16"	6-5/8"	8-3/32"	8-15/64"	10-3/8"	1"	2-9/32"	1/8"
1.5	FSH055060A24	55/64"-15/16"	6-5/8"	8-3/32"	8-15/64"	10-3/8"	1"	2-9/32"	1/8"
2	FSH062124B22	31/32"-1-3/8"	7-3/8"	9-1/16"	9-13/64"	11-11/32"	1-1/4"	2-9/32"	1/4"
2.5	FSH112124B22	1-3/16"-1-3/8"	7-3/8"	9-1/16"	9-13/64"	11-11/32"	1-1/4"	2-9/32"	1/4"
3	FSH126156D00	1-13/32"-1-7/8"	8-1/4"	10-5/16"	10-1/2"	13"	1-1/2"	2-11/16"	1/4"
4	FSH158236D48	1-29/32"-2-9/16"	9-1/8"	11-1/16"	11-1/4"	13-3/4"	1-1/2"	2-11/16"	1/4"

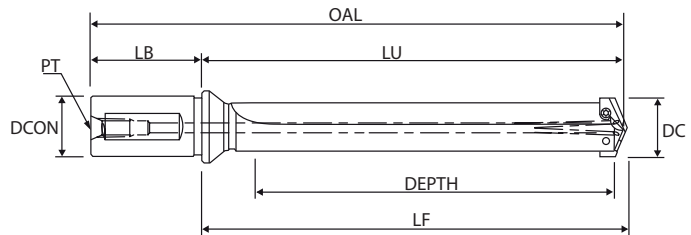
STANDARD LENGTH - Spiral flute (inch)
STANDARDOWE - Rowki skrętnie (calowe)



Series Seria	EDP	DC	DEPTH	LU	LF	OAL	DCON	LB	Pipe Tap Gwint Rurowy
									PT
Y	FSD024027536	3/8"-27/64"	2-3/8"	3-17/32"	3-5/8"	5-9/16"	3/4"	2-1/32"	1/8"
Z	FSD028032536	7/16"-1/2"	2-3/8"	3-17/32"	3-5/8"	5-9/16"	3/4"	2-1/32"	1/8"
0	FSD033044542	33/64"-11/16"	2-1/2"	3-5/8"	3-47/64"	5-21/32"	3/4"	2-1/32"	1/8"
0.5	FSD039044542	39/64"-11/16"	2-1/2"	3-5/8"	3-47/64"	5-21/32"	3/4"	2-1/32"	1/8"
1	FSD045060A24	45/64"-15/16"	6-5/8"	8-3/32"	8-15/64"	10-3/8"	1"	2-9/32"	1/8"
1.5	FSD055060A24	55/64"-15/16"	6-5/8"	8-3/32"	8-15/64"	10-3/8"	1"	2-9/32"	1/8"
2	FSD062124B22	31/32"-1-3/8"	7-3/8"	9-1/16"	9-13/64"	11-11/32"	1-1/4"	2-9/32"	1/4"
2.5	FSD112124B22	1-3/16"-1-3/8"	7-3/8"	9-1/16"	9-13/64"	11-11/32"	1-1/4"	2-9/32"	1/4"
3	FSD126156D00	1-13/32"-1-7/8"	8-1/4"	10-5/16"	10-1/2"	13"	1-1/2"	2-11/16"	1/4"
4	FSD158236D48	1-29/32"-2-9/16"	9-1/8"	11-1/16"	11-1/4"	13-3/4"	1-1/2"	2-11/16"	1/4"

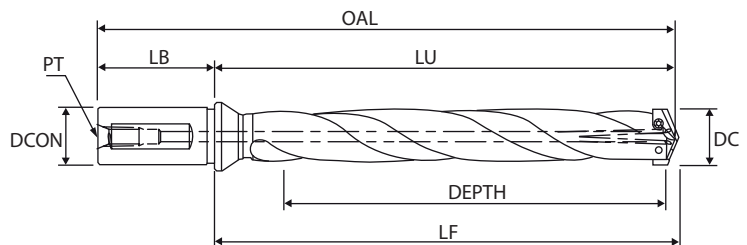
FLANGED STRAIGHT SHANK HOLDERS CHWYT WELDON

EXTENDED LENGTH - Straight flute (inch)
DŁUGIE - Rowki proste (calowe)



Series Seria	EDP	DC	DEPTH	LU	LF	OAL	DCON	LB	Pipe Tap Gwint Rurowy
									PT
Y	FSF024027736	3/8"-27/64"	4-3/8"	5-17/32"	5-5/8"	7-9/16"	3/4"	2-1/32"	1/8"
Z	FSF028032736	7/16"-1/2"	4-3/8"	5-17/32"	5-5/8"	7-9/16"	3/4"	2-1/32"	1/8"
0	FSF033044742	33/64"-11/16"	4-1/2"	5-5/8"	5-47/64"	7-21/32"	3/4"	2-1/32"	1/8"
0.5	FSF039044742	39/64"-11/16"	4-1/2"	5-5/8"	5-47/64"	7-21/32"	3/4"	2-1/32"	1/8"
1	FSF045060E24	45/64"-15/16"	10-5/8"	12-3/32"	12-15/64"	14-3/8"	1"	2-9/32"	1/8"
1.5	FSF055060E24	55/64"-15/16"	10-5/8"	12-3/32"	12-15/64"	14-3/8"	1"	2-9/32"	1/8"
2	FSF062124F22	31/32"-1-3/8"	11-3/8"	13-1/16"	13-13/64"	15-11/32"	1-1/4"	2-9/32"	1/4"
2.5	FSF112124F22	1-3/16"-1-3/8"	11-3/8"	13-1/16"	13-13/64"	15-11/32"	1-1/4"	2-9/32"	1/4"

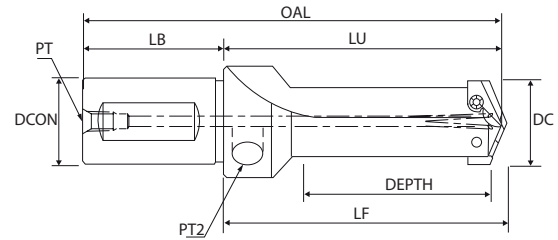
EXTENDED LENGTH - Spiral flute (inch)
DŁUGIE - Rowki skrętne (calowe)



Series Seria	EDP	DC	DEPTH	LU	LF	OAL	DCON	LB	Pipe Tap Gwint Rurowy
									PT
Y	FSE024027736	3/8"-27/64"	4-3/8"	5-17/32"	5-5/8"	7-9/16"	3/4"	2-1/32"	1/8"
Z	FSE028032736	7/16"-1/2"	4-3/8"	5-17/32"	5-5/8"	7-9/16"	3/4"	2-1/32"	1/8"
0	FSE033044742	33/64"-11/16"	4-1/2"	5-5/8"	5-47/64"	7-21/32"	3/4"	2-1/32"	1/8"
0.5	FSE039044742	39/64"-11/16"	4-1/2"	5-5/8"	5-47/64"	7-21/32"	3/4"	2-1/32"	1/8"
1	FSE045060E24	45/64"-15/16"	10-5/8"	12-3/32"	12-15/64"	14-3/8"	1"	2-9/32"	1/8"
1.5	FSE055060E24	55/64"-15/16"	10-5/8"	12-3/32"	12-15/64"	14-3/8"	1"	2-9/32"	1/8"
2	FSE062124F22	31/32"-1-3/8"	11-3/8"	13-1/16"	13-13/64"	15-11/32"	1-1/4"	2-9/32"	1/4"
2.5	FSE112124F22	1-3/16"-1-3/8"	11-3/8"	13-1/16"	13-13/64"	15-11/32"	1-1/4"	2-9/32"	1/4"

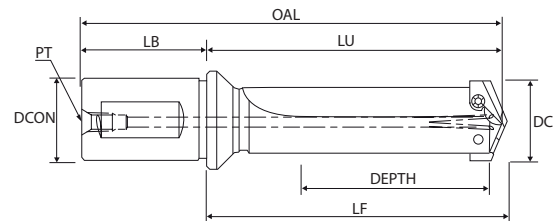
FLANGED STRAIGHT SHANK HOLDERS CHWYT WELDON

STUB LENGTH - Straight flute (metric)
BARDZO KRÓTKIE - Rowki proste (metryczne)



Series Seria	EDP	DC	DEPTH	LU	LF	OAL	DCON	LB	Pipe Tap Gwint Rurowy	
									PT	PT2
Y	FSA095110090	9.5 ~ 11.0	19.1	47.6	50.0	89.5	16.0	41.9	1/16"	1/8'
Z	FSA115125090	11.5 ~ 12.5	19.1	47.6	50.0	89.5	16.0	41.9	1/16"	1/8'
0	FSA130175090	13.0 ~ 17.5	22.2	47.6	50.4	89.5	20.0	41.9	1/8"	1/8'
0.5	FSA155175090	15.5 ~ 17.5	22.2	47.6	50.4	89.5	20.0	41.9	1/8"	1/8'
1	FSA180240129	18.0 ~ 24.0	47.6	75.8	79.4	128.9	25.0	53.1	1/8"	1/8'
1.5	FSA220240142	22.0 ~ 24.0	57.2	88.5	92.1	141.6	25.0	53.1	1/8"	1/8'
2	FSA250350146	25.0 ~ 35.0	57.2	88.5	92.1	146.4	32.0	57.9	1/4"	1/8'

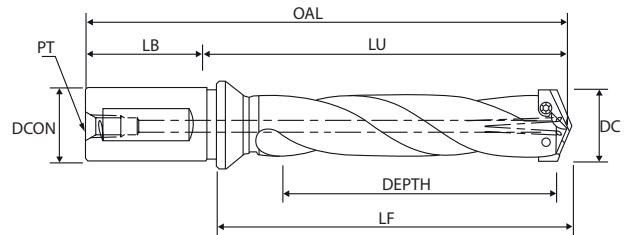
SHORT LENGTH - Spiral flute (metric)
KRÓTKIE - Rowki skrętne (metryczne)



Series Seria	EDP	DC	DEPTH	LU	LF	OAL	DCON	LB	Pipe Tap Gwint Rurowy	
									PT	
Y	FSB095110103	9.5 ~ 11.0	31.8	61.1	63.5	103.0	20.0	41.9	1/8"	
Z	FSB115125103	11.5 ~ 12.5	31.8	61.1	63.5	103.0	20.0	41.9	1/8"	
0	FSB130175105	13.0 ~ 17.5	34.9	63.5	66.3	105.4	20.0	41.9	1/8"	
0.5	FSB155175105	15.5 ~ 17.5	34.9	63.5	66.3	105.4	20.0	41.9	1/8"	
1	FSB180240160	18.0 ~ 24.0	66.7	107.2	110.7	160.2	25.0	53.1	1/8"	
1.5	FSB220240160	22.0 ~ 24.0	66.7	107.2	110.7	160.2	25.0	53.1	1/8"	
2	FSB250350187	25.0 ~ 35.0	85.7	128.6	132.2	186.5	32.0	57.9	1/4"	
2.5	FSB300350187	30.0 ~ 35.0	85.7	128.6	132.2	186.5	32.0	57.9	1/4"	
3	FSB360470243	36.0 ~ 47.0	120.7	173.0	177.8	243.1	40.0	70.1	1/4"	
4	FSB480650250	48.0 ~ 65.0	130.2	179.4	184.2	249.5	40.0	70.1	1/4"	

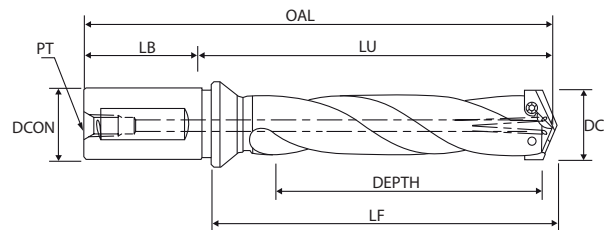
FLANGED STRAIGHT SHANK HOLDERS CHWYT WELDON

INTERMEDIATE LENGTH - Spiral flute (metric)
POŚREDNIE - Rowki skrętne (metryczne)



Series Seria	EDP	DC	DEPTH	LU	LF	OAL	DCON	LB	Pipe Tap Gwint Rurowy
									PT
1	FSC180240208	18.0 ~ 24.0	117.5	154.8	158.4	207.9	25.0	53.1	1/8"
1.5	FSC220240208	22.0 ~ 24.0	117.5	154.8	158.4	207.9	25.0	53.1	1/8"
2	FSC250350237	25.0 ~ 35.0	136.5	179.4	183.0	237.3	32.0	57.9	1/4"
2.5	FSC300350237	30.0 ~ 35.0	136.5	179.4	183.0	237.3	32.0	57.9	1/4"
3	FSC360470288A	36.0 ~ 47.0	165.1	217.5	222.3	287.6	40.0	70.1	1/4"

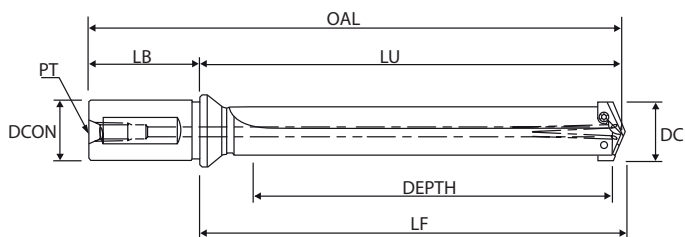
STANDARD LENGTH - Spiral flute (metric)
STANDARDOWE - Rowki skrętne (metryczne)



Series Seria	EDP	DC	DEPTH	LU	LF	OAL	DCON	LB	Pipe Tap Gwint Rurowy
									PT
Y	FSD095110132	9.5 ~ 11.0	60.3	89.7	92.1	131.6	20.0	41.9	1/8"
Z	FSD115125132	11.5 ~ 12.5	60.3	89.7	92.1	131.6	20.0	41.9	1/8"
0	FSD130175134	13.0 ~ 17.5	63.5	92.1	94.9	134.0	20.0	41.9	1/8"
0.5	FSD155175134	15.5 ~ 17.5	63.5	92.1	94.9	134.0	20.0	41.9	1/8"
1	FSD180240259	18.0 ~ 24.0	168.3	205.6	209.2	258.7	25.0	53.1	1/8"
1.5	FSD220240259	22.0 ~ 24.0	168.3	205.6	209.2	258.7	25.0	53.1	1/8"
2	FSD250350288	25.0 ~ 35.0	187.3	230.2	233.8	288.1	32.0	57.9	1/4"
2.5	FSD300350288	30.0 ~ 35.0	187.3	230.2	233.8	288.1	32.0	57.9	1/4"
3	FSD360470332A	36.0 ~ 47.0	209.6	261.9	266.7	332.0	40.0	70.1	1/4"
4	FSD480650351A	48.0 ~ 65.0	231.8	281.0	285.8	351.1	40.0	70.1	1/4"

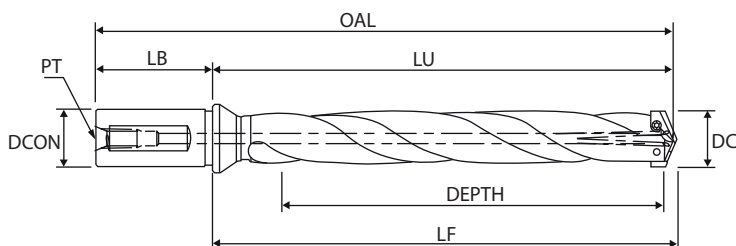
FLANGED STRAIGHT SHANK HOLDERS CHWYT WELDON

EXTENDED LENGTH - Straight Flute (metric)
DŁUGIE - Rowki Proste (metryczne)



Series Seria	EDP	DC	DEPTH	LU	LF	OAL	DCON	LB	Pipe Tap Gwint Rurowy
									PT
3	FSF360470471A	36.0 ~ 47.0	349.3	401.6	406.4	471.7	40.0	70.1	1/4"
4	FSF480650541A	48.0 ~ 65.0	422.3	471.5	476.3	541.6	40.0	70.1	1/4"

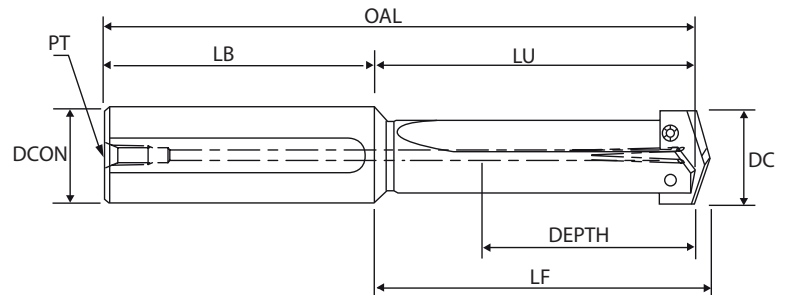
EXTENDED LENGTH - Spiral flute (inch)
DŁUGIE - Rowki skrętnie (calowe)



Series Seria	EDP	DC	DEPTH	LU	LF	OAL	DCON	LB	Pipe Tap Gwint Rurowy
									PT
Y	FSE095110182	9.5 ~ 11.0	111.1	140.5	142.9	182.4	20.0	41.9	1/8"
Z	FSE115125182	11.5 ~ 12.5	111.1	140.5	142.9	182.4	20.0	41.9	1/8"
0	FSE130175185	13.0 ~ 17.5	114.3	142.9	145.7	184.8	20.0	41.9	1/8"
0.5	FSE155175185	15.5 ~ 17.5	114.3	142.9	145.7	184.8	20.0	41.9	1/8"
1	FSE180240360	18.0 ~ 24.0	269.9	307.2	310.8	360.3	25.0	53.1	1/8"
1.5	FSE220240360	22.0 ~ 24.0	269.9	307.2	310.8	360.3	25.0	53.1	1/8"
2	FSE250350390	25.0 ~ 35.0	288.9	331.8	335.4	389.7	32.0	57.9	1/4"
2.5	FSE300350390	30.0 ~ 35.0	288.9	331.8	335.4	389.7	32.0	57.9	1/4"

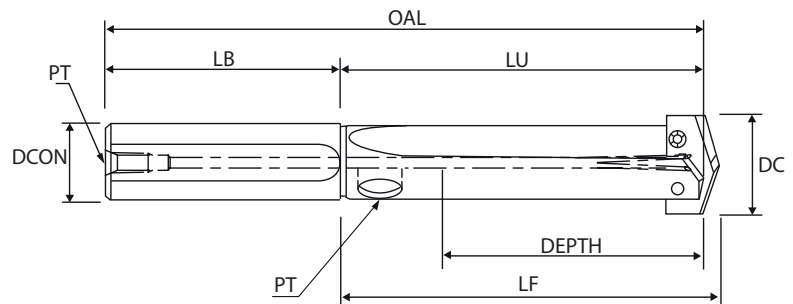
STRAIGHT SHANK HOLDERS CHWYT CYLINDRYCZNY

SHORT LENGTH - Straight flute (inch)
KRÓTKIE - Rowki proste (calowe)



Series Seria	EDP	DC	DEPTH	LU	LF	OAL	DCON	LB	Pipe Tap Gwint Rurowy
									PT
Y	SSHB024027426	3/8"-27/64"	1-1/4"	2-1/32"	2-1/8"	4-13/32"	3/4"	2-3/8"	1/8"
Z	SSHB028032426	7/16"-1/2"	1-1/4"	2-1/32"	2-1/8"	4-13/32"	3/4"	2-3/8"	1/8"
0	SSHB033044436	33/64"-11/16"	1-3/8"	2-3/16"	2-19/64"	4-9/16"	3/4"	2-3/8"	1/8"
0.5	SSHB039044436	39/64"-11/16"	1-3/8"	2-3/16"	2-19/64"	4-9/16"	3/4"	2-3/8"	1/8"

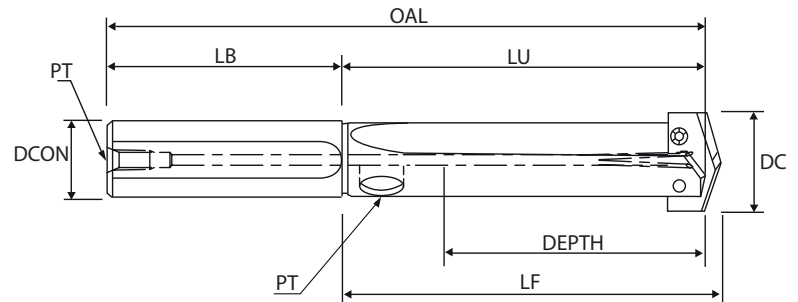
SHORT LENGTH - Straight flute (inch)
KRÓTKIE - Rowki proste (calowe)



Series Seria	EDP	DC	DEPTH	LU	LF	OAL	DCON	LB	Pipe Tap Gwint Rurowy
									PT
1	SSHB045060656	45/64"-15/16"	2-5/8"	3-7/8"	4-1/64"	6-7/8"	3/4"	3"	1/8"
	SSHB04506065A	45/64"-15/16"	2-5/8"	3-7/8"	4-1/64"	6-7/8"	1"	3"	1/8"
1.5	SSHB055060656	55/64"-15/16"	2-5/8"	3-7/8"	4-1/64"	6-7/8"	3/4"	3"	1/8"
	SSHB05506065A	55/64"-15/16"	2-5/8"	3-7/8"	4-1/64"	6-7/8"	1"	3"	1/8"
2	SSHB062124800	31/32"-1-3/8"	3-3/8"	4-1/2"	4-41/64"	8"	1"	3-1/2"	1/8"
	SSHB06212480A	31/32"-1-3/8"	3-3/8"	4-1/2"	4-41/64"	8"	1-1/4"	3-1/2"	1/8"
2.5	SSHB112124800	1-3/16"-1-3/8"	3-3/8"	4-1/2"	4-41/64"	8"	1"	3-1/2"	1/8"
	SSHB11212480A	1-3/16"-1-3/8"	3-3/8"	4-1/2"	4-41/64"	8"	1-1/4"	3-1/2"	1/8"
3	SSHB126156A00	1-13/32"-1-7/8"	4-3/4"	6"	6-3/16"	10"	1-1/4"	4"	1/4"
	SSHB126156A0A	1-13/32"-1-7/8"	4-3/4"	6"	6-3/16"	10"	1-1/2"	4"	1/4"
4	SSHB158236A32	1-29/32"-2-9/16"	5-1/8"	6-1/2"	6-11/16"	10-1/2"	1-1/2"	4"	1/4"
	SSHB158236A3A	1-29/32"-2-9/16"	5-1/8"	6-1/2"	6-11/16"	10-1/2"	1-3/4"	4"	1/4"
5	SSHB232332C32	2-1/2"-3-1/2"	6-3/4"	8-1/2"	8-3/4"	12-1/2"	2"	4"	1/2"
7	SSHB334432D56	3-17/32"-4-1/2"	6-3/4"	8-7/8"	9-1/8"	13-7/8"	3"	5"	1/2"

STRAIGHT SHANK HOLDERS CHWYT CYLINDRYCZNY

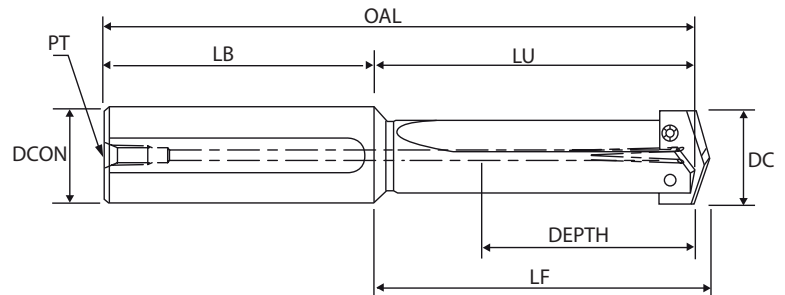
INTERMEDIATE LENGTH - Straight flute (inch)
POŚREDNIE - Rowki proste (calowe)



Series Seria	EDP	DC	DEPTH	LU	LF	OAL	DCON	LB	Pipe Tap Gwint Rurowy
									PT
1	SSHG045060856	45/64"-15/16"	4-5/8"	5-7/8"	6-1/64"	8-7/8"	1"	3"	1/8"
1.5	SSHG055060856	55/64"-15/16"	4-5/8"	5-7/8"	6-1/64"	8-7/8"	1"	3"	1/8"
2	SSHG062124A00	31/32"-1-3/8"	5-3/8"	6-1/2"	6-41/64"	10"	1-1/4"	3-1/2"	1/8"
2.5	SSHG112124A00	1-3/16"-1-3/8"	5-3/8"	6-1/2"	6-41/64"	10"	1-1/4"	3-1/2"	1/8"
3	SSHG126156B48	1-13/32"-1-7/8"	6-1/2"	7-3/4"	7-15/16"	11-3/4"	1-1/2"	4"	1/4"

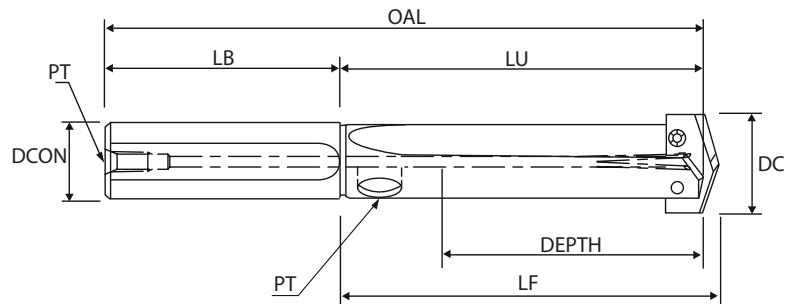
STRAIGHT SHANK HOLDERS CHWYT CYLINDRYCZNY

STANDARD LENGTH - Straight flute (inch)
STANDARDOWE - Rowki proste (calowe)



Series Seria	EDP	DC	DEPTH	LU	LF	OAL	DCON	LB	Pipe Tap Gwint Rurowy
									PT
Y	SSHH024027534	3/8"-27/64"	2-3/8"	3-5/32"	3-1/4"	5-17/32"	3/4"	2-3/8"	1/8"
Z	SSHH028032534	7/16"-1/2"	2-3/8"	3-5/32"	3-1/4"	5-17/32"	3/4"	2-3/8"	1/8"
0	SSHH033044544	33/64"-11/16"	2-1/2"	3-5/16"	3-27/64"	5-11/16"	3/4"	2-3/8"	1/8"
0.5	SSHH039044544	39/64"-11/16"	2-1/2"	3-5/16"	3-27/64"	5-11/16"	3/4"	2-3/8"	1/8"

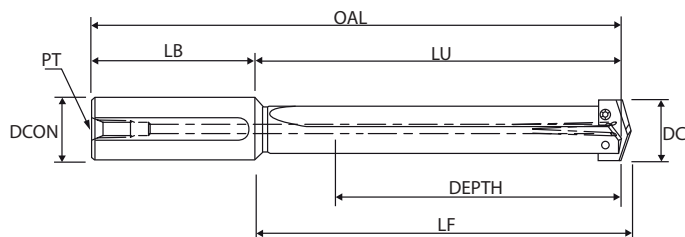
STANDARD LENGTH - Straight flute (inch)
STANDARDOWE - Rowki proste (calowe)



Series Seria	EDP	DC	DEPTH	LU	LF	OAL	DCON	LB	Pipe Tap Gwint Rurowy
									PT
1	SSHH045060A56	45/64"-15/16"	6-5/8"	7-7/8"	8-1/64"	10-7/8"	3/4"	3"	1/8"
	SSHH045060A5A	45/64"-15/16"	6-5/8"	7-7/8"	8-1/64"	10-7/8"	1"	3"	1/8"
1.5	SSHH055060A56	55/64"-15/16"	6-5/8"	7-7/8"	8-1/64"	10-7/8"	3/4"	3"	1/8"
	SSHH055060A5A	55/64"-15/16"	6-5/8"	7-7/8"	8-1/64"	10-7/8"	1"	3"	1/8"
2	SSHH062124C00	31/32"-1-3/8"	7-3/8"	8-1/2"	8-41/64"	12"	1"	3-1/2"	1/8"
	SSHH062124C0A	31/32"-1-3/8"	7-3/8"	8-1/2"	8-41/64"	12"	1-1/4"	3-1/2"	1/8"
2.5	SSHH112124C00	1-3/16"-1-3/8"	7-3/8"	8-1/2"	8-41/64"	12"	1"	3-1/2"	1/8"
	SSHH112124C0A	1-3/16"-1-3/8"	7-3/8"	8-1/2"	8-41/64"	12"	1-1/4"	3-1/2"	1/8"
3	SSHH126156D32	1-13/32"-1-7/8"	8-1/4"	9-1/2"	9-11/16"	13-1/2"	1-1/4"	4"	1/4"
	SSHH126156D3A	1-13/32"-1-7/8"	8-1/4"	9-1/2"	9-11/16"	13-1/2"	1-1/2"	4"	1/4"
4	SSHH158236E32	1-29/32"-2-9/16"	9-1/8"	10-1/2"	10-11/16"	14-1/2"	1-1/2"	4"	1/4"
	SSHH158236E3A	1-29/32"-2-9/16"	9-1/8"	10-1/2"	10-11/16"	14-1/2"	1-3/4"	4"	1/4"
5	SSHH232332G32	2-1/2"-3-1/2"	10-3/4"	12-1/2"	12-3/4"	16-1/2"	2"	4"	1/2"
7	SSHH334432H56	3-17/32"-4-1/2"	10-3/4"	12-7/8"	13-1/8"	17-7/8"	3"	5"	1/2"

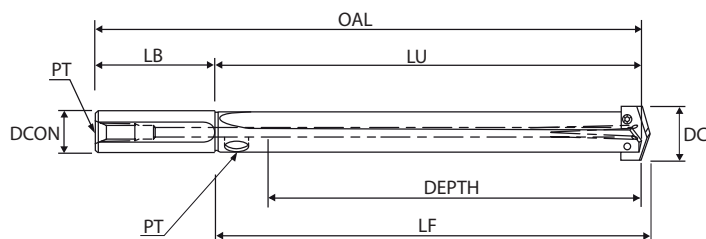
STRAIGHT SHANK HOLDERS CHWYT CYLINDRYCZNY

EXTENDED LENGTH - Straight flute (inch)
DŁUGIE - Rowki proste (calowe)



Series Seria	EDP	DC	DEPTH	LU	LF	OAL	DCON	LB	Pipe Tap Gwint Rurowy
									PT
Y	SSHF024027734	3/8"-27/64"	4-3/8"	5-5/32"	5-1/4"	7-17/32"	3/4"	2-3/8"	1/8"
Z	SSHF028032734	7/16"-1/2"	4-3/8"	5-5/32"	5-1/4"	7-17/32"	3/4"	2-3/8"	1/8"
0	SSHF033044744	33/64"-11/16"	4-1/2"	5-5/16"	5-27/64"	7-11/16"	3/4"	2-3/8"	1/8"
0.5	SSHF039044744	39/64"-11/16"	4-1/2"	5-5/16"	5-27/64"	7-11/16"	3/4"	2-3/8"	1/8"

EXTENDED LENGTH - Straight flute (inch)
DŁUGIE - Rowki proste (calowe)

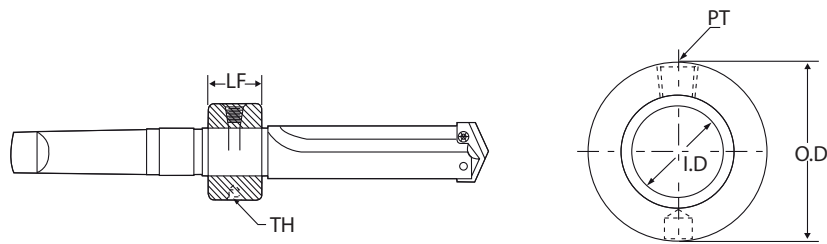


Series Seria	EDP	DC	DEPTH	LU	LF	OAL	DCON	LB	Pipe Tap Gwint Rurowy
									PT
1	SSHF045060E56	45/64"-15/16"	10-5/8"	11-7/8"	12-1/64"	14-7/8"	1"	3"	1/8"
1.5	SSHF055060E56	55/64"-15/16"	10-5/8"	11-7/8"	12-1/64"	14-7/8"	1"	3"	1/8"
2	SSHF062124G00	31/32"-1-3/8"	11-3/8"	12-1/2"	12-41/64"	16"	1-1/4"	3-1/2"	1/8"
2.5	SSHF112124G00	1-3/16"-1-3/8"	11-3/8"	12-1/2"	12-41/64"	16"	1-1/4"	3-1/2"	1/8"
3	SSHF126156S00	1-13/32"-1-7/8"	13-3/4"	15"	15-3/16"	19"	1-1/4"	4"	1/4"
4	SSHF158236M00	1-29/32"-2-9/16"	16-5/8"	18"	18-3/16"	22"	1-1/2"	4"	1/4"
5	SSHF232332000	2-1/2"-3-1/2"	18-1/4"	20"	20-1/4"	24"	2"	4"	1/2"
7	SSHF334432T00	3-17/32"-4-1/2"	21-7/8"	24"	24-1/4"	29"	3"	5"	1/2"

HOLDER ACCESSORIES AKCESORIA DO CHWYTÓW

RCA - Rotary Coolant Adapter

PDC - Pierścień Doprowadzenia Chłodzenia



Inch Inch

EDP	I.D.	O.D.	LF	Thread for driving rod Gwint pręta blokującego	Pipe Tap Gwint Rurowy	Repair kit Zestaw naprawczy	O-Ring replacements Wymiana O-Ring'a
OA110048	3/4"	1-3/4"	7/8"	5/16"-NC	1/8"	OA210048	OA310048
OA110100	1"	2-1/8"	1-1/8"	5/16"-NC	1/8"	OA210100	OA310100
OA110116	1-1/4"	2-1/2"	1-3/8"	3/8"-NC	1/4"	OA210116	OA310116
OA110148	1-3/4"	3"	1-3/8"	3/8"-NC	1/4"	OA210148	OA310148
OA110216	2-1/4"	3-3/4"	1-3/4"	1/2"-NC	1/2"	OA210216	OA310216

Metric Metryczny

EDP	I.D.	O.D.	LF	Thread for driving rod Gwint pręta blokującego	Pipe Tap Gwint Rurowy	Repair kit Zestaw naprawczy	O-Ring replacements Wymiana O-Ring'a
OA120190	19.05	44.45	22.23	M8 x 1.25	1/8"	OA220190	OA320190
OA120254	25.40	53.97	28.57	M8 x 1.25	1/8"	OA220254	OA320254
OA120317	31.75	63.50	34.92	M10 x 1.5	1/4"	OA220317	OA320317
OA120444	44.45	76.20	34.92	M10 x 1.5	1/4"	OA220444	OA320444
OA120571	57.15	95.27	44.45	M12 x 1.75	1/2"	OA220571	OA320571

TORX Screw Śruby TORX

Series Seria	EDP	Hand Driver Klucz TORX	Drill range used with Zakres średnic z którymi współpracuje	
			Inch (Calowe)	Metric (Metryczne)
Y	TX07Y0010	TX05Y0070	3/8" ~ 27/64"	9.5 mm ~ 11.0 mm
Z	TX07Z0110		7/16" ~ 1/2"	11.5 mm ~ 12.5 mm
0	TX0800210	TX0500080	33/64" ~ 11/16"	13.0 mm ~ 17.5 mm
0.5	TX0805310		39/64" ~ 11/16"	15.5 mm ~ 17.5 mm
1	TX0910410	TX0510090	45/64" ~ 15/16"	18.0 mm ~ 24.0 mm
1.5	TX0915510		55/64" ~ 15/16"	22.0 mm ~ 24.0 mm
2	TX1520610	TX0520150	31/32" ~ 1-3/8"	25.0 mm ~ 35.0 mm
2.5	TX1525710		1-3/16" ~ 1-3/8"	30.0 mm ~ 35.0 mm
3.4	TX2030810	TX0530200	1-13/32" ~ 2-9/16"	36.0 mm ~ 65.0 mm
5 ~ 8	TX2550910	TX0550250	2-1/2" ~ 4-1/2"	64.0 mm ~ 114.0 mm

MATERIAL AND COATING PERFORMANCE RECOMMENDATIONS

PARAMETRY OBRÓBK DLA MATERIAŁÓW I POKRYĆ

Material Materiał	Material Hardness Twardość materiału		Speed (m/min) Prędkość (m/min)			Feed (mm/rev) Posuw (mm/obr)						
	HB	HRc	TiN	TiCN	TiAlN	9.5 -12.5	13 -17.5	18 -24	25 -35	36 -47	48 -65	66 -114
Free machining steel 9SMn36, 9SMnPb28 10SPb20, etc. Stal automatowa	100 - 150	0	63	79	84	0.16	0.23	0.31	0.40	0.48	0.55	0.67
	150 - 200	0 - 13	58	70	81	0.16	0.23	0.31	0.40	0.48	0.55	0.67
	200 - 250	13 - 24	51	66	72	0.14	0.23	0.31	0.38	0.48	0.57	0.69
Low carbon steel C10, C15, C22, C25, etc. Stal niskowęglowa	85 - 125	0	54	67	75	0.15	0.22	0.28	0.37	0.46	0.56	0.67
	125 - 175	0 - 7	51	63	72	0.15	0.22	0.28	0.37	0.46	0.56	0.67
	175 - 225	7 - 20	49	58	69	0.13	0.19	0.24	0.34	0.43	0.50	0.57
	225 - 275	20 - 28	45	56	66	0.13	0.19	0.24	0.34	0.43	0.50	0.57
Medium carbon steel C35, C40, C45, etc. Stal średniowęglowa	125 - 175	0 - 7	52	63	75	0.14	0.22	0.28	0.35	0.45	0.55	0.65
	175 - 225	7 - 20	48	59	69	0.13	0.19	0.23	0.34	0.43	0.50	0.58
	225 - 275	20 - 28	45	56	63	0.13	0.19	0.23	0.34	0.43	0.50	0.58
	275 - 325	28 - 34	42	52	58	0.10	0.17	0.21	0.28	0.38	0.45	0.55
Structural steel St33, St- 37-2, St52, St60, etc. Stal konstrukcyjna	100 - 150	0	44	56	63	0.14	0.23	0.29	0.35	0.44	0.50	0.63
	150 - 250	0 - 24	39	47	55	0.13	0.22	0.24	0.28	0.38	0.46	0.59
	250 - 350	24 - 37	32	41	45	0.10	0.20	0.22	0.24	0.34	0.40	0.48
Cast iron gray, ductile, nodular Żeliwo szare, sferoidalne	120 - 150	0	52	64	75	0.16	0.30	0.40	0.49	0.59	0.69	0.75
	150 - 200	0 - 13	48	58	70	0.14	0.26	0.35	0.45	0.56	0.64	0.68
	200 - 220	13 - 19	42	53	58	0.14	0.23	0.30	0.41	0.46	0.52	0.60
	220 - 260	19 - 26	35	44	52	0.13	0.17	0.23	0.30	0.35	0.43	0.50
	260 - 320	26 - 34	29	35	41	0.10	0.15	0.16	0.23	0.28	0.35	0.40
Alloy steel 45CrMo4, 42CrMo4 16MnCr5, Ck75 35CrMo4, 16MnCr5, etc. Stal stopowa	125 - 175	0 - 7	48	58	63	0.15	0.20	0.24	0.36	0.43	0.47	0.53
	175 - 225	7 - 20	45	56	58	0.13	0.20	0.24	0.36	0.42	0.46	0.55
	225 - 275	20 - 28	41	50	56	0.13	0.16	0.23	0.35	0.41	0.44	0.55
	275 - 325	28 - 34	39	47	53	0.09	0.15	0.22	0.28	0.38	0.41	0.50
	325 - 375	34 - 40	36	43	46	0.08	0.15	0.21	0.27	0.38	0.40	0.51
Tool steel H13, H21, A4, etc. Stal narzędziowa	150 - 200	0 - 13	25	34	36	0.09	0.15	0.19	0.25	0.28	0.36	0.41
	200 - 250	13 - 24	19	27	29	0.09	0.15	0.19	0.25	0.28	0.36	0.41
High temperature alloy, Hastelloy B, Inconel 600, etc. Stopy żarowytrzymałe i żaroodporne, Inconel 600, itp	140 - 220	0 - 19	9	11	12	0.08	0.17	0.20	0.24	0.30	0.37	0.39
	220 - 310	19 - 33	8	9	11	0.08	0.14	0.18	0.19	0.25	0.29	0.34
High strength alloy 36CrNi- Mo4, 34CrNiMo8 40NiCrMo73, etc. Stopy o podwyższonej wytrzymałości	225 - 300	0 - 32	25	34	35	0.13	0.18	0.23	0.24	0.36	0.43	0.50
	300 - 350	32 - 37	19	26	27	0.10	0.18	0.23	0.24	0.36	0.43	0.50
	350 - 400	37 - 43	16	21	22	0.08	0.15	0.20	0.22	0.30	0.48	0.46
Aluminum Aluminium	30	0	187	229	244	0.19	0.33	0.41	0.50	0.54	0.64	0.62
	180	0 - 8	92	137	137	0.19	0.33	0.41	0.46	0.54	0.64	0.62
Stainless steel Stal nierdzewna	135 - 185	0 - 9	24	29	34	0.14	0.20	0.23	0.26	0.36	0.41	0.50
	185 - 275	9 - 28	20	23	29	0.12	0.18	0.20	0.24	0.30	0.36	0.46

MATERIAL AND COATING PERFORMANCE RECOMMENDATIONS

PARAMETRY OBRÓBK DLA MATERIAŁÓW I POKRYĆ

Material Materiał	Material Hardness Twardość materiału		Speed (m/min) Prędkość (m/min)			Feed (mm/rev) Posuw (mm/obr)				
	HB	HRC	TiN	TiCN	TiAlN	9.5 -12.5	13 -17.5	18 -24	25 -35	36 -47
Free machining steel 9SMn36, 9SMnPb28 10SPb20, etc. Stal automatowa	100 - 150	0	101	113	125	0.18	0.28	0.36	0.44	0.50
	150 - 200	0 - 13	88	99	110	0.16	0.26	0.33	0.39	0.45
	200 - 250	13 - 24	82	88	101	0.14	0.23	0.31	0.41	0.42
Low carbon steel C10, C15, C22, C25, etc. Stal niskowęglowa	85 - 125	0	94	110	119	0.20	0.24	0.31	0.42	0.46
	125 - 175	0 - 7	82	88	107	0.18	0.24	0.31	0.39	0.43
	175 - 225	7 - 20	76	82	96	0.15	0.22	0.29	0.36	0.40
	225 - 275	20 - 28	62	73	84	0.13	0.22	0.29	0.36	0.40
Medium carbon steel C35, C40, C45, etc. Stal średniowęglowa	125 - 175	0 - 7	82	88	102	0.17	0.24	0.31	0.37	0.42
	175 - 225	7 - 20	75	84	93	0.15	0.22	0.28	0.36	0.40
	225 - 275	20 - 28	66	70	84	0.15	0.22	0.28	0.36	0.40
	275 - 325	28 - 34	56	64	67	0.13	0.19	0.26	0.33	0.37
Structural steel St33, St-37-2, St52, St60, etc. Stal konstrukcyjna	100 - 150	0	75	82	91	0.19	0.26	0.34	0.39	0.43
	150 - 250	0 - 24	62	70	75	0.15	0.24	0.29	0.33	0.37
	250 - 350	24 - 37	55	64	73	0.13	0.23	0.27	0.29	0.33
Cast iron gray, ductile, nodular Żeliwo szare, sferoidalne	120 - 150	0	98	125	137	0.18	0.30	0.37	0.46	0.56
	150 - 200	0 - 13	95	101	125	0.17	0.26	0.32	0.42	0.53
	200 - 220	13 - 19	75	91	111	0.14	0.23	0.30	0.38	0.45
	220 - 260	19 - 26	66	81	93	0.13	0.15	0.28	0.33	0.37
	260 - 320	26 - 34	56	70	79	0.13	0.18	0.23	0.28	0.33
Alloy steel 45CrMo4, 42CrMo4 16MnCr5, Ck75 35CrMo4, 16MnCr5, etc. Stal stopowa	125 - 175	0 - 7	79	85	98	0.18	0.25	0.32	0.40	0.45
	175 - 225	7 - 20	73	81	88	0.15	0.23	0.29	0.38	0.42
	225 - 275	20 - 28	66	73	81	0.15	0.21	0.28	0.37	0.41
	275 - 325	28 - 34	62	70	78	0.12	0.20	0.27	0.33	0.40
	325 - 375	34 - 40	53	58	64	0.10	0.18	0.23	0.30	0.38
Tool steel H13, H21, A4, etc. Stal narzędziowa	150 - 200	0 - 13	50	56	67	0.09	0.18	0.22	0.28	0.31
	200 - 250	13 - 24	37	46	50	0.09	0.18	0.22	0.28	0.31
High temperature alloy, Hastelloy B, Inconel 600, etc. Stopy żarowytrzymałe i żaroodporne, Inconel 600, itp	140 - 220	0 - 19	26	27	30	0.10	0.17	0.23	0.27	0.33
	220 - 310	19 - 33	20	23	24	0.10	0.14	0.20	0.24	0.30
High strength alloy 36CrNiMo4, 34CrNiMo8 40NiCrMo73, etc. Stopy o podwyższonej wytrzymałości	225 - 300	0 - 32	49	55	62	0.15	0.23	0.25	0.29	0.38
	300 - 350	32 - 37	43	49	55	0.12	0.20	0.23	0.27	0.35
	350 - 400	37 - 43	38	43	47	0.10	0.18	0.20	0.24	0.30
Aluminum Aluminium	30	0	366	396	427	0.24	0.38	0.45	0.50	0.53
	180	0 - 8	244	290	291	0.22	0.33	0.40	0.45	0.48
Stainless steel Stal nierdzewna	135 - 185	0 - 9	50	55	62	0.19	0.19	0.21	0.24	0.30
	185 - 275	9 - 28	38	44	46	0.15	0.17	0.20	0.21	0.25

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