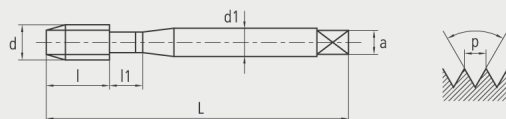
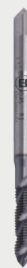


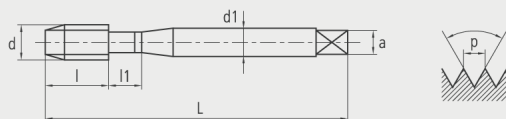
JIS P Line**SFT****High Performance &
General Purpose****HSS-PM****HSS-PM****HSS-PM****HSS-PM****Norm****JIS****JIS****JIS****JIS****Coating****TiCN****TiCN****TiCN****TiCN****C/1.5****C/2.5****C/2.5****C/2.5**

L	l	l1	d1	a	d	p	Limit		Art.Stock	Art.Stock	Art.Stock	Art.Stock
37	4.5	-	3	2.5	M1	0.25	OH1	0.75	585811 ●			
37	4.5	-	3	2.5	M1.2	0.25	OH1	0.95	585812 ●			
37	6.5	-	3	2.5	M1.4	0.3	OH1	1.1	585813 ●			
37	8	-	3	2.5	M1.6	0.35	OH2	1.25	585814 ●			
45	11	-	3	2.5	M2	0.4	OH2	1.6		585815 ●		
45	12	-	3	2.5	M2.5	0.45	OH2	2.1		585816 ●		
50	5	13	4	3.2	M3	0.5	OH2	2.5			585817 ●	
50	6	13	4	3.2	M3.5	0.6	OH2	2.9			585818 ●	
57	9	11	5	4	M4	0.7	OH2	3.3			585819 ●	
66	8	17	5.5	4.5	M5	0.8	OH2	4.2			585820 ●	
69	12	12	6	4.5	M6	1	OH2	5			585821 ●	
78	13	10	6.2	5	M7	1	OH3	6			585822 ●	
70	13	23	6.2	5	M8	1	OH3	7				585823 ●
70	13	23	6.2	5	M8	1.25	OH3	6.8				585824 ●
75	13	30	7	5.5	M10	1	OH3	9				585825 ●
75	13	30	7	5.5	M10	1.25	OH3	8.8				585826 ●
75	15	28	7	5.5	M10	1.5	OH4	8.5				585827 ●
82	13	29	8.5	6.5	M12	1	OH3	11				585828 ○
82	13	29	8.5	6.5	M12	1.25	OH4	10.8				585829 ●
82	17	25	8.5	6.5	M12	1.5	OH4	10.5				585830 ●
82	17	25	8.5	6.5	M12	1.75	OH4	10.3				585831 ●
88	20	31	10.5	8	M14	1	OH3	13				585832 ○
88	20	31	10.5	8	M14	1.25	OH4	12.75				585833 ●
88	20	31	10.5	8	M14	1.5	OH4	12.5				585834 ●
88	20	31	10.5	8	M14	2	OH5	12				585835 ●
95	20	32	12.5	10	M16	1	OH3	15				585836 ○
95	20	32	12.5	10	M16	1.25	OH4	14.75				585837 ●
95	20	32	12.5	10	M16	1.5	OH4	14.5				585838 ●
95	20	32	12.5	10	M16	2	OH5	14				585839 ●

★ TiCN coating provides excellent wear resistance and smooth chip removal

★ For Carbon Steel, Alloy Steel with a hardness of below 30 HRC, Stainless Steel, Cast Iron, and Non-ferrous Alloys.

P	M	K	N	S	H
●	○	○	○	-	-

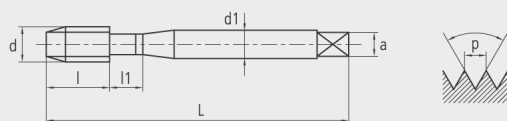
JIS P Line**POT****High Performance &
General Purpose****HSS-PM****HSS-PM****HSS-PM****Norm****JIS****JIS****JIS****Coating****TiCN****TiCN****TiCN****C/5****C/5****C/5**

L	l	l1	d1	a	d	p	Limit		Art.Stock	Art.Stock	Art.Stock
37	4.5	-	3	2.5	M1	0.25	OH1	0.75	595811 ●		
37	5.5	-	3	2.5	M1.2	0.25	OH1	0.95	595812 ●		
37	9	-	3	2.5	M1.4	0.3	OH1	1.1	595813 ●		
37	8	-	3	2.5	M1.6	0.35	OH2	1.25	595814 ●		
45	11	-	3	2.5	M2	0.4	OH2	1.6	595815 ●		
45	12	-	3	2.5	M2.5	0.45	OH2	2.1	595816 ●		
50	12	7	4	3.2	M3	0.5	OH2	2.5		595817 ●	
50	13	7	4	3.2	M3.5	0.6	OH2	2.9		595818 ●	
57	14	7	5	4	M4	0.7	OH2	3.3		595819 ●	
66	16	9	5.5	4.5	M5	0.8	OH2	4.2		595820 ●	
69	19.5	9.5	6	4.5	M6	1	OH2	5		595821 ●	
78	13	10	6.2	5	M7	1	OH3	6		595822 ○	
70	22	15	6.2	5	M8	1	OH3	7			595823 ●
70	22	15	6.2	5	M8	1.25	OH3	6.8			595824 ●
75	24	19	7	5	M10	1	OH3	9			595825 ○
75	24	19	7	5	M10	1.25	OH3	8.8			595826 ●
75	24	19	7	5	M10	1.5	OH4	8.5			595827 ●
82	29	17	8.5	6.5	M12	1	OH3	11			595828 ○
82	29	17	8.5	6.5	M12	1.25	OH4	10.8			595829 ●
82	29	17	8.5	6.5	M12	1.5	OH4	10.5			595830 ●
82	29	17	8.5	6.5	M12	1.75	OH4	10.3			595831 ●
88	20	31	10.5	8	M14	1	OH3	13			595832 ○
88	20	31	10.5	8	M14	1.25	OH4	12.75			595833 ●
88	20	31	10.5	8	M14	1.5	OH4	12.5			595834 ●
88	20	31	10.5	8	M14	2	OH5	12			595835 ●
95	20	32	12.5	10	M16	1	OH3	15			595836 ○
95	20	32	12.5	10	M16	1.25	OH4	14.75			595837 ●
95	20	32	12.5	10	M16	1.5	OH4	14.5			595838 ●
95	20	32	12.5	10	M16	2	OH5	14			595839 ●

* TiCN coating provides excellent wear resistance and smooth chip removal

* For Carbon Steel, Alloy Steel with a hardness of below 30 HRC, Stainless Steel, Cast Iron, and Non-ferrous Alloys.

P	M	K	N	S	H
●	○	○	○	-	-

JIS P Line STT | High Performance for cast iron


Norm

Coating



L	l	l1	d1	a	d	p	Limit	
66	16	9	5.5	3.2	M3	0.5	OH3	2.5
66	16	9	5.5	4	M4	0.7	OH3	3.3
66	16	9	5.5	4.5	M5	0.8	OH3	4.2
69	19.5	9.5	6	4.5	M6	1	OH3	5
78	13	10	6.2	5	M7	1	OH3	6
70	22	15	6.2	5	M8	1	OH4	7
70	22	15	6.2	5	M8	1.25	OH4	6.8
75	24	19	7	5.5	M10	1	OH5	9
75	24	19	7	5.5	M10	1.25	OH4	8.8
75	24	19	7	5.5	M10	1.5	OH4	8.5
82	29	17	8.5	6.5	M12	1	OH5	11
82	29	17	8.5	6.5	M12	1.25	OH5	10.8
82	29	17	8.5	6.5	M12	1.5	OH5	10.5
82	29	17	8.5	6.5	M12	1.75	OH4	10.3
88	20	31	10.5	8	M14	1	OH6	13
88	20	31	10.5	8	M14	1.25	OH5	12.75
88	20	31	10.5	8	M14	1.5	OH5	12.5
88	20	31	10.5	8	M14	2	OH4	12
90	20	32	12.5	10	M16	1	OH6	15
90	20	32	12.5	10	M16	1.25	OH5	14.75
90	20	32	12.5	10	M16	1.5	OH5	14.5
90	20	32	12.5	10	M16	2	OH4	14

HSS-PM



JIS

AlTiN(Si)

C/3

Art.Stock

605831 ○

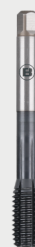
605832 ○

605811 ○

605812 ○

605813 ○

HSS-PM



JIS

AlTiN(Si)

C/3

Art.Stock

605814 ○

605815 ○

605816 ○

605817 ○

605818 ○

605819 ○

605820 ○

605821 ○

605822 ○

605823 ○

605824 ○

605825 ○

605826 ○

605827 ○

605828 ○

605829 ○

605830 ○

* AlTiN(Si) coating provides excellent wear resistance

* For Gray Cast Iron and Ductile Iron, with high processing accuracy, ideal for large-scale continuous production.

P	M	K	N	S	H
-	-	⊙	-	-	-

JIS P Line NRT | High Performance for steel


HSS-PM



HSS-PM



HSS-PM

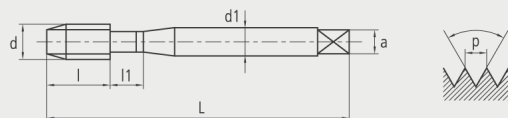


Norm

Coating



L	l	l1	d1	a	d	p	Limit		Art.Stock	Art.Stock	Art.Stock
31	3	-	3	2.5	M1	0.2	RH4	0.9-0.92	615811 ○		
31	3.5	-	3	2.5	M1	0.25	RH4	0.9-0.92	615812 ●		
31	3	-	3	2.5	M1.2	0.2	RH4	1.1-1.15	615813 ○		
31	3.5	-	3	2.5	M1.2	0.25	RH4	1.1-1.12	615814 ●		
36	3	-	3	2.5	M1.4	0.2	RH4	1.3-1.32	615815 ○		
36	6.5	-	3	2.5	M1.4	0.3	RH4	1.27-1.29	615816 ●		
36	3	-	3	2.5	M1.6	0.2	RH4	1.5-1.52	615817 ○		
35.5	8	-	3	2.5	M1.6	0.35	RH4	1.44-1.48	615818 ●		
35.5	8	-	3	2.5	M1.7	0.35	RH4	1.54-1.58	615819 ●		
43.5	4	-	3	2.5	M2	0.25	RH4	1.87-1.9	615820 ○		
43.5	10	-	3	2.5	M2	0.4	RH5	1.81-1.85	615821 ●		
43.5	10	-	3	2.5	M2.3	0.3	RH5	2.11-2.15	615822 ●		
43.5	13	-	3	2.5	M2.5	0.45	RH5	2.28-2.33	615823 ●		
43.5	13	-	3	2.5	M2.6	0.45	RH5	2.38-2.43	615824 ●		
48	6	8	4	3.2	M3	0.35	RH4	2.82-2.87		615825 ○	
48	16	-	4	3.2	M3	0.5	RH7	2.76-2.81	615826 ●		
48	16	-	4	3.2	M3.5	0.6	RH7	3.2-3.26	615827 ●		
55	8	8	5	4	M4	0.5	RH7	3.75-3.78		615828 ○	
55	18	-	5	4	M4	0.7	RH7	3.65-3.7	615829 ●		
64	8	8	5.5	4.5	M5	0.5	RH7	4.75-4.8		615830 ○	
63.5	20	-	5.5	4.5	M5	0.8	RH7	4.59-4.66	615831 ●		
66	12	12	6	4.5	M6	0.5	RH7	5.75-5.8		615832 ○	

JIS P Line NRT | High Performance for steel


HSS-PM

HSS-PM

HSS-PM



Norm

JIS

JIS

JIS

Coating

TICN-AL

TICN-AL

TICN-AL



C/2

C/2

C/2

Art.Stock

Art.Stock

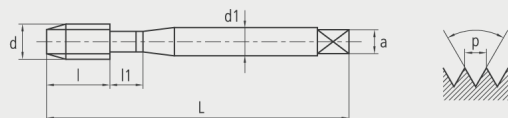
Art.Stock

L	l	l1	d1	a	d	p	Limit				
66	12	12	6	4.5	M6	0.75	RH7	5.62-5.70			
66.5	27	-	6	4.5	M6	1	RH7	5.48-5.57	615834 ●	615833 ○	
70	13	10	6.2	5	M7	1	RH7	6.48-5.57			615835 ●
70	13	23	6.2	5	M8	0.75	RH7	7.62-7.71			615836 ○
70	13	23	6.2	5	M8	1	RH7	7.48-7.57			615837 ●
70	13	23	6.2	5	M8	1.25	RH7	7.34-7.41			615838 ●
75	13	30	7	5.5	M10	0.75	RH7	9.62-9.71			615839 ○
75	13	30	7	5.5	M10	1	RH7	9.48-9.57			615840 ●
75	13	30	7	5.5	M10	1.25	RH7	9.34-9.41			615841 ●
75	15	28	7	5.5	M10	1.5	RH8	9.18-8.28			615842 ●
82	13	29	8.5	6.5	M12	1	RH7	11.48-11.57			615843 ●
82	13	29	8.5	6.5	M12	1.25	RH7	11.34-11.41			615844 ●
82	17	25	8.5	6.5	M12	1.5	RH8	11.18-11.28			615845 ●
82	17	25	8.5	6.5	M12	1.75	RH9	11.05-11.15			615846 ●
88	20	31	10.5	8	M14	1	RH7	13.5-13.55			615847 ●
88	20	31	10.5	8	M14	1.25	RH7	13.37-13.42			615848 ●
88	20	31	10.5	8	M14	1.5	RH8	13.21-13.3			615849 ●
88	20	31	10.5	8	M14	2	RH10	12.92-13.04			615850 ●
95	20	32	12.5	10	M16	1	RH7	15.5-15.58			615851 ●
95	20	32	12.5	10	M16	1.25	RH7	15.37-15.45			615852 ●
95	20	32	12.5	10	M16	1.5	RH8	15.21-15.35			615853 ●
95	20	32	12.5	10	M16	2	RH10	14.92-15.04			615854 ●

* TICN-AL provides excellent wear resistance

* For Carbon Steel and Alloy Steel with a hardness of below 30 HRC.

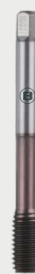
P	M	K	N	S	H
○	-	-	-	-	-

JIS P Line NRT | High Performance for stainless steel


HSS-PM

HSS-PM

HSS-PM



Norm

JIS

JIS

JIS

Coating

TiN(Si)

TiN(Si)

TiN(Si)

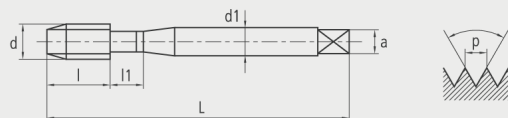


C/2

C/2

C/2

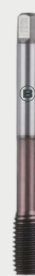
L	l	l1	d1	a	d	p	Limit		Art.Stock	Art.Stock	Art.Stock
31	3	-	3	2.5	M1	0.2	RH4	0.9-0.92	625811 ○		
31	3.5	-	3	2.5	M1	0.25	RH4	0.9-0.92	625812 ●		
31	3	-	3	2.5	M1.2	0.2	RH4	1.1-1.15	625813 ○		
31	3.5	-	3	2.5	M1.2	0.25	RH4	1.1-1.12	625814 ●		
36	3	-	3	2.5	M1.4	0.2	RH4	1.3-1.32	625815 ○		
36	6.5	-	3	2.5	M1.4	0.3	RH4	1.27-1.29	625816 ●		
36	3	-	3	2.5	M1.6	0.2	RH4	1.5-1.52	625817 ○		
35.5	8	-	3	2.5	M1.6	0.35	RH4	1.44-1.48	625818 ●		
35.5	8	-	3	2.5	M1.7	0.35	RH4	1.54-1.58	625819 ●		
43.5	4	-	3	2.5	M2	0.25	RH4	1.87-1.9	625820 ○		
43.5	10	-	3	2.5	M2	0.4	RH5	1.81-1.85	625821 ●		
43.5	10	-	3	2.5	M2.3	0.3	RH5	2.11-2.15	625822 ○		
43.5	13	-	3	2.5	M2.5	0.45	RH5	2.28-2.33	625823 ●		
43.5	13	-	3	2.5	M2.6	0.45	RH5	2.38-2.43	625824 ●		
48	6	8	4	3.2	M3	0.35	RH4	2.82-2.87		625825 ○	
48	16	-	4	3.2	M3	0.5	RH7	2.76-2.81	625826 ●		
48	16	-	4	3.2	M3.5	0.6	RH7	3.2-3.26	625827 ●		
55	8	8	5	4	M4	0.5	RH7	3.75-3.78		625828 ○	
55	18	-	5	4	M4	0.7	RH7	3.65-3.7	625829 ●		
64	8	8	5.5	4.5	M5	0.5	RH7	4.75-4.8		625830 ○	
63.5	20	-	5.5	4.5	M5	0.8	RH7	4.59-4.66	625831 ●		
66	12	12	6	4.5	M6	0.5	RH7	5.75-5.8		625832 ○	

JIS P Line NRT | High Performance for stainless steel


HSS-PM

HSS-PM

HSS-PM



Norm

JIS

JIS

JIS

Coating

TiN(Si)

TiN(Si)

TiN(Si)



C/2

C/2

C/2

Art.Stock

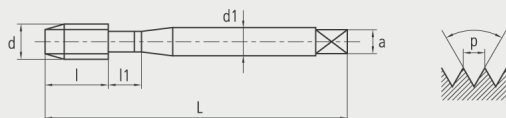
Art.Stock

Art.Stock

L	l	l1	d1	a	d	p	Limit		Art.Stock	Art.Stock	Art.Stock
66	12	12	6	4.5	M6	0.75	RH7	5.62-5.70		625833 ○	
66.5	27	-	6	4.5	M6	1	RH7	5.48-5.57	625834 ●		
70	13	10	6.2	5	M7	1	RH7	6.48-5.57			625835 ●
70	13	23	6.2	5	M8	0.75	RH7	7.62-7.71			625836 ○
70	13	23	6.2	5	M8	1	RH7	7.48-7.57			625837 ●
70	13	23	6.2	5	M8	1.25	RH7	7.34-7.41			625838 ●
75	13	30	7	5.5	M10	0.75	RH7	9.62-9.71			625839 ○
75	13	30	7	5.5	M10	1	RH7	9.48-9.57			625840 ●
75	13	30	7	5.5	M10	1.25	RH7	9.34-9.41			625841 ●
75	15	28	7	5.5	M10	1.5	RH8	9.18-8.28			625842 ●
82	13	29	8.5	6.5	M12	1	RH7	11.48-11.57			625843 ●
82	13	29	8.5	6.5	M12	1.25	RH7	11.34-11.41			625844 ●
82	17	25	8.5	6.5	M12	1.5	RH8	11.18-11.28			625845 ●
82	17	25	8.5	6.5	M12	1.75	RH9	11.05-11.15			625846 ●
88	20	31	10.5	8	M14	1	RH7	13.5-13.55			625847 ●
88	20	31	10.5	8	M14	1.25	RH7	13.37-13.42			625848 ●
88	20	31	10.5	8	M14	1.5	RH8	13.21-13.3			625849 ●
88	20	31	10.5	8	M14	2	RH10	12.92-13.04			625850 ●
95	20	32	12.5	10	M16	1	RH7	15.5-15.58			625851 ●
95	20	32	12.5	10	M16	1.25	RH7	15.37-15.45			625852 ●
95	20	32	12.5	10	M16	1.5	RH8	15.21-15.35			625853 ●
95	20	32	12.5	10	M16	2	RH10	14.92-15.04			625854 ●

★ TiN(Si) coating is designed for challenging machining of stainless steel, offering excellent machining characteristics and outstanding wear resistance.
★ For Stainless Steel, including the 200 series and 300 series.

P	M	K	N	S	H
-	⊙	-	-	-	-

JIS P Line NRT | High Performance
for non ferrous alloy steel


HSS-PM



JIS

DLC

C/2

Art.Stock

HSS-PM



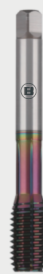
JIS

DLC

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Art.Stock

HSS-PM



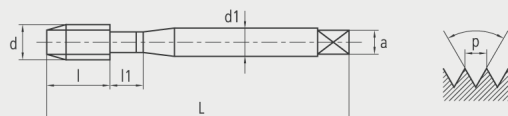
JIS

DLC

C/2

Art.Stock

L	l	l1	d1	a	d	p	Limit		Art.Stock	Art.Stock	Art.Stock
31	3	-	3	2.5	M1	0.2	RH4	0.9-0.92	635811 ○		
31	3.5	-	3	2.5	M1	0.25	RH4	0.9-0.92	635812 ●		
31	3	-	3	2.5	M1.2	0.2	RH4	1.1-1.15	635813 ○		
31	3.5	-	3	2.5	M1.2	0.25	RH4	1.1-1.12	635814 ●		
36	3	-	3	2.5	M1.4	0.2	RH4	1.3-1.32	635815 ○		
36	6.5	-	3	2.5	M1.4	0.3	RH4	1.27-1.29	635816 ●		
36	3	-	3	2.5	M1.6	0.2	RH4	1.5-1.52	635817 ○		
35.5	8	-	3	2.5	M1.6	0.35	RH4	1.44-1.48	635818 ●		
35.5	8	-	3	2.5	M1.7	0.35	RH4	1.54-1.58	635819 ●		
43.5	4	-	3	2.5	M2	0.25	RH4	1.87-1.9	635820 ○		
43.5	10	-	3	2.5	M2	0.4	RH5	1.81-1.85	635821 ●		
43.5	10	-	3	2.5	M2.3	0.3	RH5	2.11-2.15	635822 ○		
43.5	13	-	3	2.5	M2.5	0.45	RH5	2.28-2.33	635823 ●		
43.5	13	-	3	2.5	M2.6	0.45	RH5	2.38-2.43	635824 ○		
48	6	8	4	3.2	M3	0.35	RH4	2.82-2.87		635825 ○	
48	16	-	4	3.2	M3	0.5	RH7	2.76-2.81	635826 ●		
48	16	-	4	3.2	M3.5	0.6	RH7	3.2-3.26	635827 ●		
55	8	8	5	4	M4	0.5	RH7	3.75-3.78		635828 ○	
55	18	-	5	4	M4	0.7	RH7	3.65-3.7	635829 ●		
64	8	8	5.5	4.5	M5	0.5	RH7	4.75-4.8		635830 ○	
63.5	20	-	5.5	4.5	M5	0.8	RH7	4.59-4.66	635831 ●		
66	12	12	6	4.5	M6	0.5	RH7	5.75-5.8		635832 ○	

JIS P Line NRT | High Performance
for non ferrous alloy steel


HSS-PM

HSS-PM

HSS-PM



Norm

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Coating

DLC

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DLC



C/2

C/2

C/2

L	l	l1	d1	a	d	p	Limit		Art.Stock	Art.Stock	Art.Stock
66	12	12	6	4.5	M6	0.75	RH7	5.62-5.70		635833 ○	
66.5	27	-	6	4.5	M6	1	RH7	5.48-5.57	635834 ●		
70	13	10	6.2	5	M7	1	RH7	6.48-5.57			635835 ○
70	13	23	6.2	5	M8	0.75	RH7	7.62-7.71			635836 ○
70	13	23	6.2	5	M8	1	RH7	7.48-7.57			635837 ●
70	13	23	6.2	5	M8	1.25	RH7	7.34-7.41			635838 ●
75	13	30	7	5.5	M10	0.75	RH7	9.62-9.71			635839 ○
75	13	30	7	5.5	M10	1	RH7	9.48-9.57			635840 ●
75	13	30	7	5.5	M10	1.25	RH7	9.34-9.41			635841 ●
75	15	28	7	5.5	M10	1.5	RH8	9.18-8.28			635842 ●
82	13	29	8.5	6.5	M12	1	RH7	11.48-11.57			635843 ●
82	13	29	8.5	6.5	M12	1.25	RH7	11.34-11.41			635844 ●
82	17	25	8.5	6.5	M12	1.5	RH8	11.18-11.28			635845 ●
82	17	25	8.5	6.5	M12	1.75	RH9	11.05-11.15			635846 ●
88	20	31	10.5	8	M14	1	RH7	13.5-13.55			635847 ●
88	20	31	10.5	8	M14	1.25	RH7	13.37-13.42			635848 ●
88	20	31	10.5	8	M14	1.5	RH8	13.21-13.3			635849 ●
88	20	31	10.5	8	M14	2	RH10	12.92-13.04			635850 ●
95	20	32	12.5	10	M16	1	RH7	15.5-15.58			635851 ●
95	20	32	12.5	10	M16	1.25	RH7	15.37-15.45			635852 ●
95	20	32	12.5	10	M16	1.5	RH8	15.21-15.35			635853 ●
95	20	32	12.5	10	M16	2	RH10	14.92-15.04			635854 ●

- ★ DLC coating offers excellent wear resistance and minimizes chip adhesion.
- ★ For processing non-ferrous metals, including ADC, AC, ZDC, MC, Cu, BSC and others.

P	M	K	N	S	H
-	-	-	●	-	-