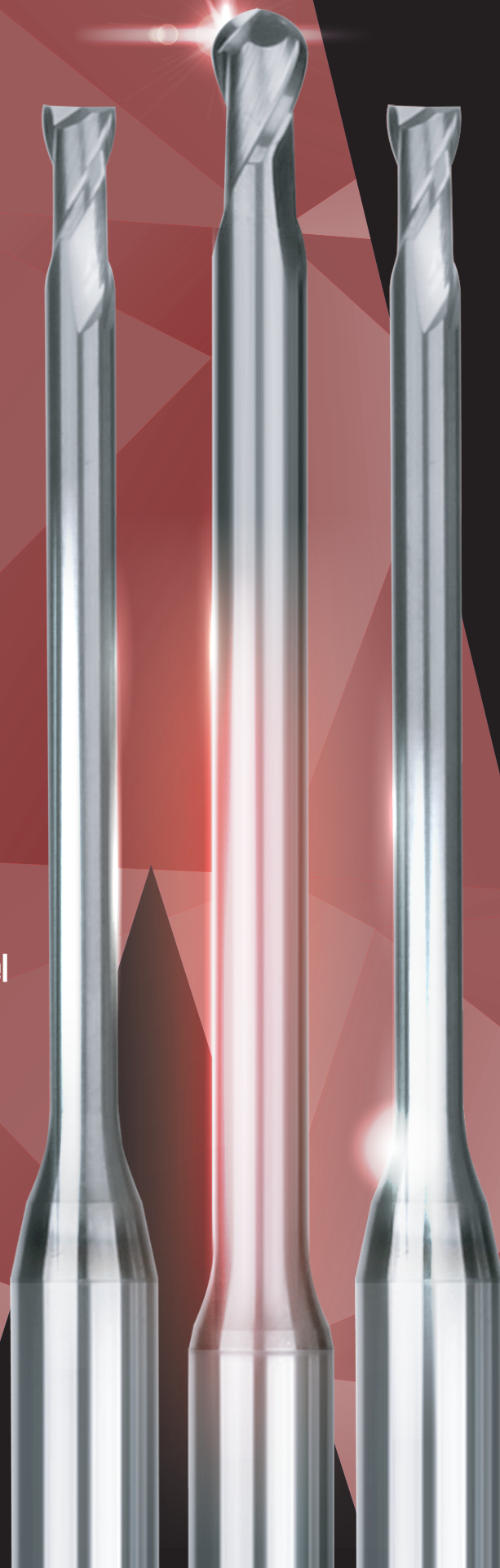


www.iwidin.com



WINNER 7+

A new Line of Rib Style Metric Square and Ball End Mills for hard material



Suitable for machining Tool steel, Alloy steel and Mold steel below 60HRc

Suitable for deep machining with diameters starting at 0.1mm and each with multiple neck relief options

Improved tool life with improved coating

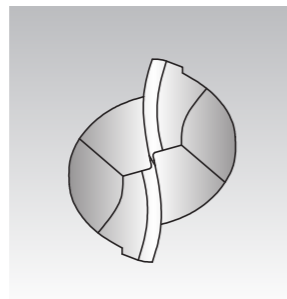


01

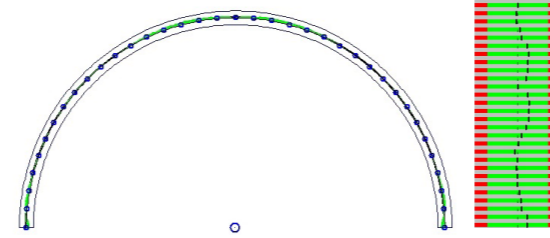
Special Feature

Winner 7+ Series

- Most optimal performance when machining high hardened workpieces below 60 HRC
- Various shapes possible to machine due to wide selection of neck length
- Precision machining possible due to tighter tool tolerance



End face shape



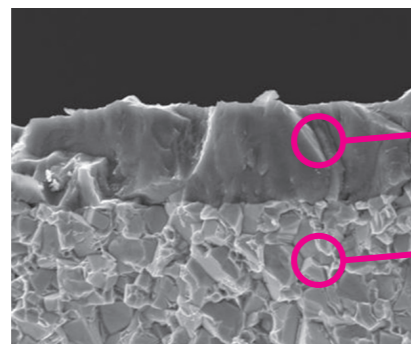
Precise ball shape

02

Improvement Points

Winner 7+ Series

- Improved tool performance due to new Nano-coating which has improved toughness and heat resistance elements
- High precision machining available due to tight tolerances in the shape of flute and diameters of the balls
- Bridges gap in product offering from Winner Series to Zamus Star



AlTiN

Improved wear resistance, chipping resistance applying PVD technology with excellent adhesion

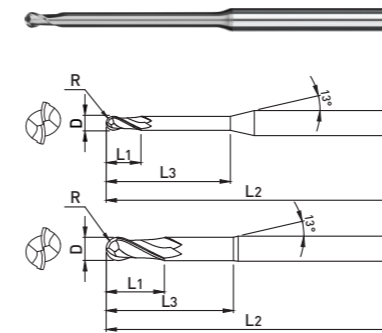
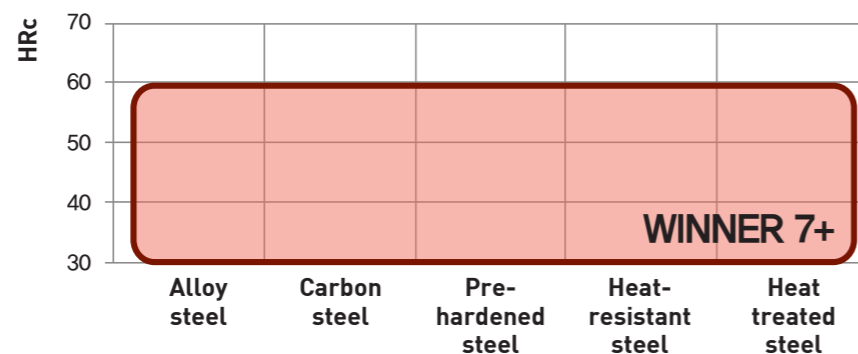
Applying wear resistance substrate

Improved hardness and wear resistance by applying a stable base of fine grain

03

Applications

Winner 7+ Series



WB712+

2 FLUTES BALL NOSE RIB TYPE ENDMILL

- Optimal performance when machining high hardened material below 60 HRC
- Various shapes possible to machine due to wide selection of neck length
- Precision machining possible due to tighter tool tolerance

EDP No	D	R	L ₁	L ₃	L ₂	D ₂
WB712001002P	0.1	0.05	0.1	0.2	40	4
WB712001003P	0.1	0.05	0.1	0.3	40	4
WB712001005P	0.1	0.05	0.1	0.5	40	4
WB71200101P	0.1	0.05	0.1	1	40	4
WB712002005P	0.2	0.1	0.2	0.5	40	4
WB71200201P	0.2	0.1	0.2	1	40	4
WB712002015P	0.2	0.1	0.2	1.5	40	4
WB71200202P	0.2	0.1	0.2	2	40	4
WB71200203P	0.2	0.1	0.2	3	40	4
WB71200301P	0.3	0.15	0.3	1	40	4
WB712003015P	0.3	0.15	0.3	1.5	40	4
WB71200302P	0.3	0.15	0.3	2	40	4
WB712003025P	0.3	0.15	0.3	2.5	40	4
WB71200303P	0.3	0.15	0.3	3	40	4
WB71200304P	0.3	0.15	0.3	4	40	4
WB71200305P	0.3	0.15	0.3	5	40	4
WB71200401P	0.4	0.2	0.4	1	40	4
WB712004015P	0.4	0.2	0.4	1.5	40	4
WB71200402P	0.4	0.2	0.4	2	40	4
WB712004025P	0.4	0.2	0.4	2.5	40	4
WB71200403P	0.4	0.2	0.4	3	40	4
WB71200404P	0.4	0.2	0.4	4	40	4
WB71200405P	0.4	0.2	0.4	5	40	4
WB71200406P	0.4	0.2	0.4	6	40	4
WB71200408P	0.4	0.2	0.4	8	40	4
WB71200410P	0.4	0.2	0.4	10	40	4
WB71200501P	0.5	0.25	0.5	1	45	4
WB712005015P	0.5	0.25	0.5	1.5	45	4
WB71200501S6P	0.5	0.25	0.5	1	45	6
WB71200502P	0.5	0.25	0.5	2	45	4
WB712005025P	0.5	0.25	0.5	2.5	45	4
WB71200502S6P	0.5	0.25	0.5	2	45	6
WB71200503P	0.5	0.25	0.5	3	45	4
WB71200504P	0.5	0.25	0.5	4	45	4
WB71200504S6P	0.5	0.25	0.5	4	45	6
WB71200505P	0.5	0.25	0.5	5	45	4
WB71200506P	0.5	0.25	0.5	6	45	4
WB71200508P	0.5	0.25	0.5	8	45	4
WB71200510P	0.5	0.25	0.5	10	45	4
WB71200712P	0.5	0.25	0.5	12	45	4
WB71200514P	0.5	0.25	0.5	14	45	4
WB71200516P	0.5	0.25	0.5	16	45	4

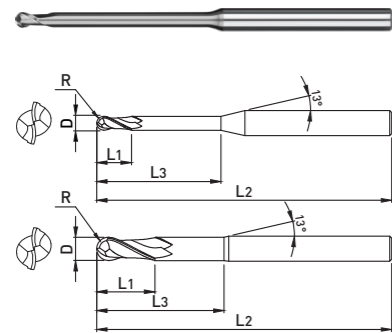
Applicable Working Material

Carbon Steels (S45C, S55C...) ~HB225	Alloy Steels (SCM, SK...) HB22 ~325	Prehardened Steels (NAK...) HRC30~50	Hardened Steels		Copper	Graphite	Cast Iron 500~	Aluminum	Stainless Steels
			~HRC55 SKD61	~HRC55 SKD11					
○	○	◎	◎	◎					○

Tolerance

D		D ₂
~ D6	0 ~ -0.012mm	h5
D8 ~ 12	0 ~ -0.015mm	

○:General Application ◎:The most suitable Application



WB712+

2 FLUTES BALL NOSE RIB TYPE ENDMILL

- Optimal performance when machining high hardened material below 60 HRC
- Various shapes possible to machine due to wide selection of neck length
- Precision machining possible due to tighter tool tolerance

EDP No	D	R	L ₁	L ₃	L ₂	D ₂
WB71200601P	0.6	0.3	0.6	1	45	4
WB71200601S6P	0.6	0.3	0.6	1	45	6
WB71200602P	0.6	0.3	0.6	2	45	4
WB71200602S6P	0.6	0.3	0.6	2	45	6
WB71200603P	0.6	0.3	0.6	3	45	4
WB71200603S6P	0.6	0.3	0.6	3	45	6
WB71200604P	0.6	0.3	0.6	4	45	4
WB71200604S6P	0.6	0.3	0.6	4	45	6
WB71200605P	0.6	0.3	0.6	5	45	4
WB71200605S6P	0.6	0.3	0.6	5	45	6
WB71200606P	0.6	0.3	0.6	6	45	4
WB71200606S6P	0.6	0.3	0.6	6	45	6
WB71200608P	0.6	0.3	0.6	8	45	4
WB71200608S6P	0.6	0.3	0.6	8	45	6
WB71200610P	0.6	0.3	0.6	10	45	4
WB71200610S6P	0.6	0.3	0.6	10	45	6
WB71200612P	0.6	0.3	0.6	12	45	4
WB71200612S6P	0.6	0.3	0.6	12	45	6
WB71200614P	0.6	0.3	0.6	14	45	4
WB71200614S6P	0.6	0.3	0.6	14	45	6
WB71200616P	0.6	0.3	0.6	16	45	4
WB71200616S6P	0.6	0.3	0.6	16	45	6
WB71200702P	0.7	0.35	0.7	2	45	4
WB71200704P	0.7	0.35	0.7	4	45	4
WB71200706P	0.7	0.35	0.7	6	45	4
WB71200708P	0.7	0.35	0.7	8	45	4
WB71200710P	0.7	0.35	0.7	10	45	4
WB71200712P	0.7	0.35	0.7	12	45	4
WB71200801P	0.8	0.4	0.8	1	45	4
WB71200801S6P	0.8	0.4	0.8	1	45	6
WB71200802P	0.8	0.4	0.8	2	45	4
WB71200802S6P	0.8	0.4	0.8	2	45	6
WB71200803P	0.8	0.4	0.8	3	45	4
WB71200803S6P	0.8	0.4	0.8	3	45	6
WB71200804P	0.8	0.4	0.8	4	45	4
WB71200804S6P	0.8	0.4	0.8	4	45	6
WB71200805P	0.8	0.4	0.8	5	45	4
WB71200805S6P	0.8	0.4	0.8	5	45	6
WB71200806P	0.8	0.4	0.8	6	45	4
WB71200806S6P	0.8	0.4	0.8	6	45	6
WB71200808P	0.8	0.4	0.8	8	45	4
WB71200808S6P	0.8	0.4	0.8	8	45	6

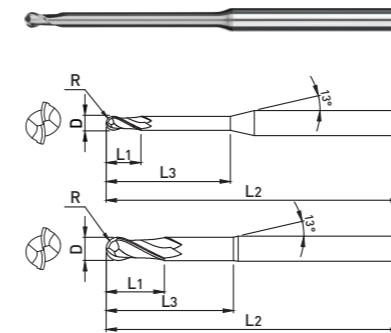
■ Applicable Working Material

Carbon Steels (S45C, S55C...) ~ HB225	Alloy Steels (SCM, SK...) HB22 ~ 325	Prehardened Steels (NAK...) HRC30~50	Hardened Steels		Copper	Graphite	Cast Iron 500~	Aluminum	Stainless Steels
			~HRC55 SKD61	~HRC55 SKD11					
○	○	◎	◎	◎					○

○: General Application ◎: The most suitable Application

■ Tolerance

D		D ₂
~ D6	0 ~ -0.012mm	h5
D8 ~ 12	0 ~ -0.015mm	



WB712+

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EDP No	D	R	L ₁	L ₃	L ₂	D ₂
WB71200810P	0.8	0.4	0.8	10	45	4
WB71200810S6P	0.8	0.4	0.8	10	45	6
WB71200812P	0.8	0.4	0.8	12	45	4
WB71200812S6P	0.8	0.4	0.8	12	45	6
WB71200814P	0.8	0.4	0.8	14	45	4
WB71200814S6P	0.8	0.4	0.8	14	45	6
WB71200816P	0.8	0.4	0.8	16	45	4
WB71200816S6P	0.8	0.4	0.8	16	45	6
WB71200820P	0.8	0.4	0.8	20	45	4
WB71200820S6P	0.8	0.4	0.8	20	55	6
WB71200904P	0.9	0.45	0.9	4	45	4
WB71200906P	0.9	0.45	0.9	6	45	4
WB71200908P	0.9	0.45	0.9	8	45	4
WB71200910P	0.9	0.45	0.9	10	45	4
WB71201002P	1	0.5	1	2	50	4
WB71201002S6P	1	0.5	1	2	50	6
WB71201003P	1	0.5	1	3	50	4
WB71201003S6P	1	0.5	1	3	50	6
WB71201004P	1	0.5	1	4	50	4
WB71201004S6P	1	0.5	1	4	50	6
WB71201005P	1	0.5	1	5	50	4
WB71201005S6P	1	0.5	1	5	50	6
WB71201006P	1	0.5	1	6	50	4
WB71201006S6P	1	0.5	1	6	50	6
WB71201007P	1	0.5	1	7	50	4
WB71201007S6P	1	0.5	1	7	50	6
WB71201008P	1	0.5	1	8	50	4
WB71201008S6P	1	0.5	1	8	50	6
WB71201009P	1	0.5	1	9	50	4
WB71201009S6P	1	0.5	1	9	50	6
WB71201010P	1	0.5	1	10	50	4
WB71201010S6P	1	0.5	1	10	50	6
WB71201012P	1	0.5	1	12	50	4
WB71201012S6P	1	0.5	1	12	50	6
WB71201014P	1	0.5	1	14	50	4
WB71201014S6P	1	0.5	1	14	50	6
WB71201016P	1	0.5	1	16	50	4
WB71201016S6P	1	0.5	1	16	50	6
WB71201018P	1	0.5	1	18	50	4
WB71201018S6P	1	0.5	1	18	50	6
WB71201020P	1	0.5	1	20	55	4
WB71201020S6P	1	0.5	1	20	55	6

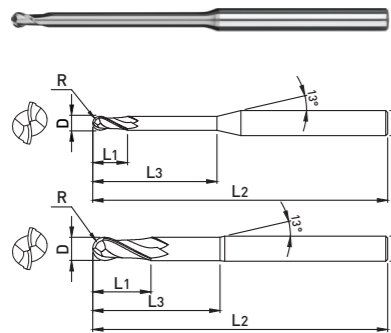
■ Applicable Working Material

Carbon Steels (S45C, S55C...) ~ HB225	Alloy Steels (SCM, SK...) HB22 ~ 325	Prehardened Steels (NAK...) HRC30~50	Hardened Steels		Copper	Graphite	Cast Iron 500~	Aluminum	Stainless Steels
			~HRC55 SKD61	~HRC55 SKD11					
○	○	◎	◎	◎					○

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■ Tolerance

D		D ₂
~ D6	0 ~ -0.012mm	h5
D8 ~ 12	0 ~ -0.015mm	



WB712+

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EDP No	D	R	L ₁	L ₃	L ₂	D ₂
WB71201022P	1	0.5	1	22	60	4
WB71201022S6P	1	0.5	1	22	60	6
WB71201026P	1	0.5	1	26	60	4
WB71201026S6P	1	0.5	1	26	60	6
WB71201030P	1	0.5	1	30	70	4
WB71201030S6P	1	0.5	1	30	70	6
WB71201040P	1	0.5	1	40	80	4
WB71201050P	1	0.5	1	50	100	4
WB71201204P	1.2	0.6	1.2	4	50	4
WB71201206P	1.2	0.6	1.2	6	50	4
WB71201208P	1.2	0.6	1.2	8	50	4
WB71201210P	1.2	0.6	1.2	10	50	4
WB71201212P	1.2	0.6	1.2	12	50	4
WB71201216P	1.2	0.6	1.2	16	50	4
WB71201220P	1.2	0.6	1.2	20	50	4
WB71201226P	1.2	0.6	1.2	26	60	4
WB71201406P	1.4	0.7	1.4	6	50	4
WB71201408P	1.4	0.7	1.4	8	50	4
WB71201410P	1.4	0.7	1.4	10	50	4
WB71201412P	1.4	0.7	1.4	12	50	4
WB71201416P	1.4	0.7	1.4	16	50	4
WB71201503P	1.5	0.75	1.5	3	50	4
WB71201503S6P	1.5	0.75	1.5	3	50	6
WB71201504P	1.5	0.75	1.5	4	50	4
WB71201504S6P	1.5	0.75	1.5	4	50	6
WB71201505P	1.5	0.75	1.5	5	50	4
WB71201506P	1.5	0.75	1.5	6	50	4
WB71201506S6P	1.5	0.75	1.5	6	50	6
WB71201507P	1.5	0.75	1.5	7	50	4
WB71201508P	1.5	0.75	1.5	8	50	4
WB71201508S6P	1.5	0.75	1.5	8	50	6
WB71201510P	1.5	0.75	1.5	10	50	4
WB71201510S6P	1.5	0.75	1.5	10	50	6
WB71201512P	1.5	0.75	1.5	12	50	4
WB71201512S6P	1.5	0.75	1.5	12	50	6
WB71201514P	1.5	0.75	1.5	14	50	4
WB71201514S6P	1.5	0.75	1.5	14	50	6
WB71201516P	1.5	0.75	1.5	16	50	4
WB71201516S6P	1.5	0.75	1.5	16	50	6
WB71201518P	1.5	0.75	1.5	18	50	4
WB71201518S6P	1.5	0.75	1.5	18	50	6
WB71201520P	1.5	0.75	1.5	20	55	4

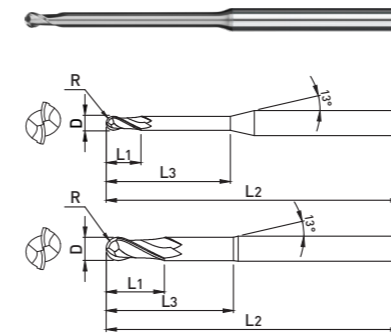
■ Applicable Working Material

Carbon Steels (S45C, S55C...) ~ HB225	Alloy Steels (SCM, SK...) HB22 ~ 325	Prehardened Steels (NAK...) HRC30~50	Hardened Steels		Copper	Graphite	Cast Iron 500~	Aluminum	Stainless Steels
			~HRC55 SKD61	~HRC55 SKD11					
○	○	◎	◎	◎					○

○:General Application ◎:The most suitable Application

■ Tolerance

D		D ₂
~ D6	0 ~ -0.012mm	h5
D8 ~ 12	0 ~ -0.015mm	



WB712+

2 FLUTES BALL NOSE RIB TYPE ENDMILL

- Optimal performance when machining high hardened material below 60 HRC
- Various shapes possible to machine due to wide selection of neck length
- Precision machining possible due to tighter tool tolerance

EDP No	D	R	L ₁	L ₃	L ₂	D ₂
WB71201520S6P	1.5	0.75	1.5	20	55	6
WB71201522P	1.5	0.75	1.5	22	60	4
WB71201522S6P	1.5	0.75	1.5	22	60	6
WB71201526P	1.5	0.75	1.5	26	60	4
WB71201526S6P	1.5	0.75	1.5	26	60	6
WB71201530P	1.5	0.75	1.5	30	70	4
WB71201530S6P	1.5	0.75	1.5	30	70	6
WB71201535P	1.5	0.75	1.5	35	70	4
WB71201535S6P	1.5	0.75	1.5	35	70	6
WB71201540P	1.5	0.75	1.5	40	80	4
WB71201540S6P	1.5	0.75	1.5	40	80	6
WB71201604P	1.6	0.8	1.6	4	50	4
WB71201606P	1.6	0.8	1.6	6	50	4
WB71201608P	1.6	0.8	1.6	8	50	4
WB71201610P	1.6	0.8	1.6	10	50	4
WB71201612P	1.6	0.8	1.6	12	50	4
WB71201616P	1.6	0.8	1.6	16	50	4
WB71201620P	1.6	0.8	1.6	20	50	4
WB71201804P	1.8	0.9	1.8	4	50	4
WB71201806P	1.8	0.9	1.8	6	50	4
WB71201808P	1.8	0.9	1.8	8	50	4
WB71201810P	1.8	0.9	1.8	10	50	4
WB71201812P	1.8	0.9	1.8	12	50	4
WB71201816P	1.8	0.9	1.8	16	50	4
WB71201820P	1.8	0.9	1.8	20	50	4
WB71202004P	2	1	2	4	50	4
WB71202004S6P	2	1	2	4	50	6
WB71202006P	2	1	2	6	50	4
WB71202006S6P	2	1	2	6	50	6
WB71202008P	2	1	2	8	50	4
WB71202008S6P	2	1	2	8	50	6
WB71202010P	2	1	2	10	50	4
WB71202010S6P	2	1	2	10	50	6
WB71202012P	2	1	2	12	50	4
WB71202012S6P	2	1	2	12	50	6
WB71202014P	2	1	2	14	50	4
WB71202014S6P	2	1	2	14	50	6
WB71202016P	2	1	2	16	50	4
WB71202016S6P	2	1	2	16	50	6
WB71202018P	2	1	2	18	55	4
WB71202018S6P	2	1	2	18	55	6
WB71202020P	2	1	2	20	55	4

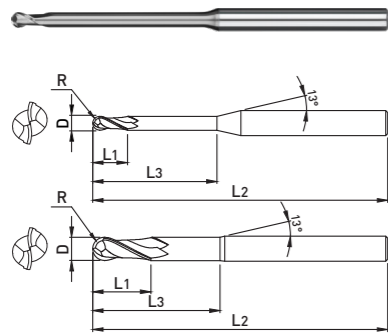
■ Applicable Working Material

Carbon Steels (S45C, S55C...) ~ HB225	Alloy Steels (SCM, SK...) HB22 ~ 325	Prehardened Steels (NAK...) HRC30~50	Hardened Steels		Copper	Graphite	Cast Iron 500~	Aluminum	Stainless Steels
			~HRC55 SKD61	~HRC55 SKD11					
○	○	◎	◎	◎					○

○:General Application ◎:The most suitable Application

■ Tolerance

D		D ₂
~ D6	0 ~ -0.012mm	h5
D8 ~ 12	0 ~ -0.015mm	



WB712+

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EDP No	D	R	L ₁	L ₃	L ₂	D ₂
WB712020S6P	2	1	2	20	55	6
WB71202022P	2	1	2	22	60	4
WB71202022S6P	2	1	2	22	60	6
WB71202026P	2	1	2	26	60	4
WB71202026S6P	2	1	2	26	60	6
WB71202030P	2	1	2	30	70	4
WB71202030S6P	2	1	2	30	70	6
WB71202035P	2	1	2	35	70	4
WB71202035S6P	2	1	2	35	70	6
WB71202040P	2	1	2	40	80	4
WB71202040S6P	2	1	2	40	80	6
WB71202045P	2	1	2	45	90	4
WB71202045S6P	2	1	2	45	90	6
WB71202050P	2	1	2	50	100	4
WB71202050S6P	2	1	2	50	100	6
WB71202060P	2	1	2	60	110	4
WB71202508P	2.5	1.25	2.5	8	50	4
WB71202510P	2.5	1.25	2.5	10	50	4
WB71202512P	2.5	1.25	2.5	12	50	4
WB71202516P	2.5	1.25	2.5	16	50	4
WB71202520P	2.5	1.25	2.5	20	50	4
WB71202522P	2.5	1.25	2.5	22	60	4
WB71202526P	2.5	1.25	2.5	26	60	4
WB71202530P	2.5	1.25	2.5	30	70	4
WB71202535P	2.5	1.25	2.5	35	70	4
WB71202540P	2.5	1.25	2.5	40	80	4
WB71202545P	2.5	1.25	2.5	45	90	4
WB71202550P	2.5	1.25	2.5	50	100	4
WB71203006P	3	1.5	3	6	50	6
WB71203008P	3	1.5	3	8	50	6
WB71203010P	3	1.5	3	10	50	6
WB71203012P	3	1.5	3	12	50	6
WB71203014P	3	1.5	3	14	60	6
WB71203016P	3	1.5	3	16	60	6
WB71203018P	3	1.5	3	18	60	6
WB71203020P	3	1.5	3	20	60	6
WB71203022P	3	1.5	3	22	65	6
WB71203026P	3	1.5	3	26	65	6
WB71203030P	3	1.5	3	30	70	6
WB71203035P	3	1.5	3	35	70	6
WB71203040P	3	1.5	3	40	80	6
WB71203045P	3	1.5	3	45	90	6

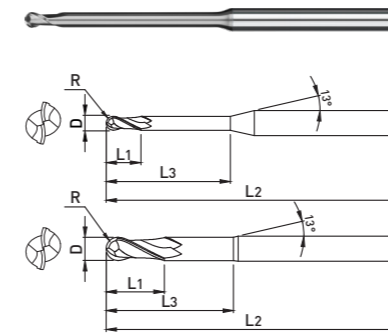
■ Applicable Working Material

Carbon Steels (S45C, S55C...) ~ HB225	Alloy Steels (SCM, SK...) HB22 ~ 325	Prehardened Steels (NAK...) HRC30~50	Hardened Steels		Copper	Graphite	Cast Iron 500~	Aluminum	Stainless Steels
			~HRC55 SKD61	~HRC55 SKD11					
○	○	◎	◎	◎					○

○:General Application ◎:The most suitable Application

■ Tolerance

D		D ₂
~ D6	0 ~ -0.012mm	h5
D8 ~ 12	0 ~ -0.015mm	



WB712+

2 FLUTES BALL NOSE RIB TYPE ENDMILL

- Optimal performance when machining high hardened material below 60 HRC
- Various shapes possible to machine due to wide selection of neck length
- Precision machining possible due to tighter tool tolerance

EDP No	D	R	L ₁	L ₃	L ₂	D ₂
WB71203050P	3	1.5	3	50	100	6
WB71203060P	3	1.5	3	60	100	6
WB71203510P	3.5	1.75	3	10	50	6
WB71203516P	3.5	1.75	3	16	60	6
WB71203520P	3.5	1.75	3	20	60	6
WB71203526P	3.5	1.75	3	26	65	6
WB71203530P	3.5	1.75	3	30	70	6
WB71204008P	4	2	4	8	50	6
WB71204010P	4	2	4	10	50	6
WB71204012P	4	2	4	12	50	6
WB71204014P	4	2	4	14	60	6
WB71204016P	4	2	4	16	60	6
WB71204018P	4	2	4	18	60	6
WB71204020P	4	2	4	20	60	6
WB71204022P	4	2	4	22	65	6
WB71204026P	4	2	4	26	65	6
WB71204030P	4	2	4	30	70	6
WB71204035P	4	2	4	35	70	6
WB71204040P	4	2	4	40	80	6
WB71204045P	4	2	4	45	90	6
WB71204050P	4	2	4	50	100	6
WB71204055P	4	2	4	55	100	6
WB71204060P	4	2	4	60	100	6
WB71205015P	5	2.5	6	15	60	6
WB71205020P	5	2.5	6	20	60	6
WB71205026P	5	2.5	6	26	65	6
WB71205030P	5	2.5	6	30	70	6
WB71205035P	5	2.5	6	35	70	6
WB71205040P	5	2.5	6	40	80	6
WB71205045P	5	2.5	6	45	90	6
WB71205050P	5	2.5	6	50	100	6
WB71205055P	5	2.5	6	55	100	6
WB71205060P	5	2.5	6	60	100	6
WB71206020P	6	3	8	20	60	6
WB7120602090P	6	3	12	20	90	6
WB71206030P	6	3	8	30	60	6
WB7120603090P	6	3	12	30	90	6
WB71208025P	8	4	10	25	70	8
WB71208025100P	8	4	14	25	100	8
WB71208035P	8	4	10	35	70	8
WB71208035100P	8	4	14	35	100	8
WB71210030P	10	5	12	30	75	10

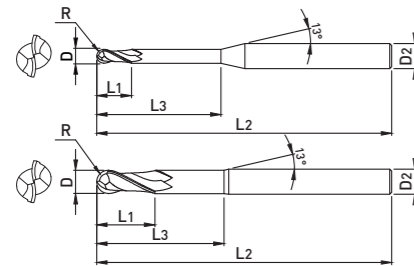
■ Applicable Working Material

Carbon Steels (S45C, S55C...) ~ HB225	Alloy Steels (SCM, SK...) HB22 ~ 325	Prehardened Steels (NAK...) HRC30~50	Hardened Steels		Copper	Graphite	Cast Iron 500~	Aluminum	Stainless Steels
			~HRC55 SKD61	~HRC55 SKD11					
○	○	◎	◎	◎					○

○:General Application ◎:The most suitable Application

■ Tolerance

D		D ₂
~ D6	0 ~ -0.012mm	h5
D8 ~ 12	0 ~ -0.015mm	



WB712+

2 FLUTES BALL NOSE RIB TYPE ENDMILL

- Optimal performance when machining high hardened material below 60 HRC
- Various shapes possible to machine due to wide selection of neck length
- Precision machining possible due to tighter tool tolerance

EDP No	D	R	L ₁	L ₃	L ₂	D ₂
WB71210030100P	10	5	18	30	100	10
WB71210040P	10	5	12	40	75	10
WB71210040100P	10	5	18	40	100	10
WB71212032P	12	6	14	32	80	12
WB71212032110P	12	6	22	32	110	12
WB71212045P	12	6	14	45	80	12
WB71212045110P	12	6	22	45	110	12

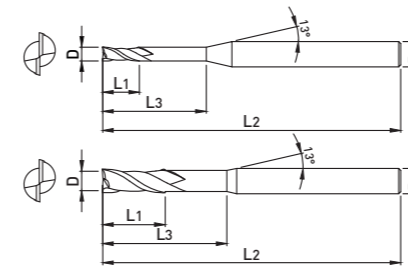
■ Applicable Working Material

Carbon Steels (S45C, S55C...) ~ HB225	Alloy Steels (SCM, SK...) HB22 ~ 325	Prehardened Steels(NAK...) HRC30~50	Hardened Steels		Copper	Graphite	Cast Iron 500~	Aluminum	Stainless Steels
			~HRC55 SKD61	~HRC55 SKD11					
○	○	◎	◎	◎					○

○:General Application ◎:The most suitable Application

■ Tolerance

D		D ₂
~ D6	0 ~ -0,012mm	h5
D8 ~ 12	0 ~ -0,015mm	



WE712+

2 FLUTES SQUARE RIB TYPE ENDMILL

- Optimal performance when machining high hardened material below 60 HRC
- Various shapes possible to machine due to wide selection of neck length
- Precision machining possible due to tighter tool tolerance

EDP No	D	L ₁	L ₃	L ₂	D ₂
WE712001003P	0.1	0.15	0.3	40	4
WE712001005P	0.1	0.15	0.5	40	4
WE71200101P	0.1	0.15	1	40	4
WE712002005P	0.2	0.3	0.5	40	4
WE71200201P	0.2	0.3	1	40	4
WE712002015P	0.2	0.3	1.5	40	4
WE71200202P	0.2	0.3	2	40	4
WE71200301P	0.3	0.5	1	40	4
WE712003015P	0.3	0.5	1.5	40	4
WE71200302P	0.3	0.5	2	40	4
WE712003025P	0.3	0.5	2.5	40	4
WE71200303P	0.3	0.5	3	40	4
WE71200304P	0.3	0.5	4	40	4
WE71200305P	0.3	0.5	5	40	4
WE71200401P	0.4	0.6	1	40	4
WE712004015P	0.4	0.6	1.5	40	4
WE71200402P	0.4	0.6	2	40	4
WE712004025P	0.4	0.6	2.5	40	4
WE71200403P	0.4	0.6	3	40	4
WE71200404P	0.4	0.6	4	40	4
WE71200405P	0.4	0.6	5	40	4
WE71200406P	0.4	0.6	6	40	4
WE71200408P	0.4	0.6	8	40	4
WE71200410P	0.4	0.6	10	40	4
WE71200501P	0.5	0.7	1	45	4
WE712005015P	0.5	0.7	1.5	45	4
WE71200502P	0.5	0.7	2	45	4
WE712005025P	0.5	0.7	2.5	45	4
WE71200503P	0.5	0.7	3	45	4
WE71200504P	0.5	0.7	4	45	4
WE71200505P	0.5	0.7	5	45	4
WE71200506P	0.5	0.7	6	45	4
WE71200508P	0.5	0.7	8	45	4
WE71200510P	0.5	0.7	10	45	4
WE71200512P	0.5	0.7	12	45	4
WE71200514P	0.5	0.7	14	45	4
WE71200516P	0.5	0.7	16	45	4
WE71200602P	0.6	0.9	2	45	4
WE71200603P	0.6	0.9	3	45	4
WE71200604P	0.6	0.9	4	45	4
WE71200605P	0.6	0.9	5	45	4
WE71200606P	0.6	0.9	6	45	4

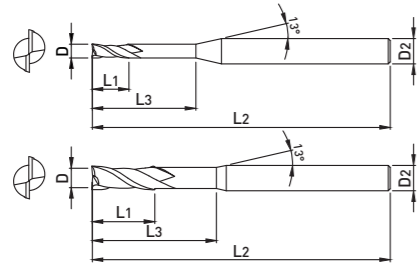
■ Applicable Working Material

Carbon Steels (S45C, S55C...) ~ HB225	Alloy Steels (SCM, SK...) HB22 ~ 325	Prehardened Steels(NAK...) HRC30~50	Hardened Steels		Copper	Graphite	Cast Iron 500~	Aluminum	Stainless Steels
			~HRC55 SKD61	~HRC55 SKD11					
○	○	◎	◎	◎					○

○:General Application ◎:The most suitable Application

■ Tolerance

D		D ₂
~ D6	0 ~ -0,012mm	h5
D8 ~ 12	0 ~ -0,015mm	



WE712+

2 FLUTES SQUARE RIB TYPE ENDMILL

- Optimal performance when machining high hardened material below 60 HRC
- Various shapes possible to machine due to wide selection of neck length
- Precision machining possible due to tighter tool tolerance

EDP No	D	L1	L3	L2	D2
WE71200608P	0.6	0.9	8	45	4
WE71200610P	0.6	0.9	10	45	4
WE71200612P	0.6	0.9	12	45	4
WE71200614P	0.6	0.9	14	45	4
WE71200616P	0.6	0.9	16	45	4
WE71200702P	0.7	1.2	2	45	4
WE71200704P	0.7	1.2	4	45	4
WE71200706P	0.7	1.2	6	45	4
WE71200708P	0.7	1.2	8	45	4
WE71200710P	0.7	1.2	10	45	4
WE71200712P	0.7	1.2	12	45	4
WE71200802P	0.8	1.2	2	45	4
WE71200803P	0.8	1.2	3	45	4
WE71200804P	0.8	1.2	4	45	4
WE71200805P	0.8	1.2	5	45	4
WE71200806P	0.8	1.2	6	45	4
WE71200808P	0.8	1.2	8	45	4
WE71200810P	0.8	1.2	10	45	4
WE71200812P	0.8	1.2	12	45	4
WE71200814P	0.8	1.2	14	45	4
WE71200816P	0.8	1.2	16	45	4
WE71200820P	0.8	1.2	20	45	4
WE71200906P	0.9	1.3	6	45	4
WE71200908P	0.9	1.3	8	45	4
WE71200910P	0.9	1.3	10	45	4
WE71201002P	1	1.5	2	50	4
WE71201003P	1	1.5	3	50	4
WE71201004P	1	1.5	4	50	4
WE71201005P	1	1.5	5	50	4
WE71201006P	1	1.5	6	50	4
WE71201007P	1	1.5	7	50	4
WE71201008P	1	1.5	8	50	4
WE71201010P	1	1.5	10	50	4
WE71201012P	1	1.5	12	50	4
WE71201014P	1	1.5	14	50	4
WE71201016P	1	1.5	16	50	4
WE71201018P	1	1.5	18	50	4
WE71201020P	1	1.5	20	50	4
WE71201022P	1	1.5	22	60	4
WE71201026P	1	1.5	26	60	4
WE71201030P	1	1.5	30	70	4
WE71201040P	1	1.5	40	80	4

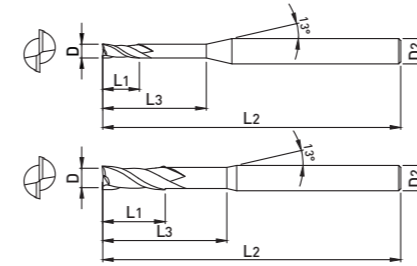
■ Applicable Working Material

Carbon Steels (S45C, S55C...) ~ HB225	Alloy Steels (SCM, SK...) HB22 ~ 325	Prehardened Steels(NAK...) HRC30~50	Hardened Steels		Copper	Graphite	Cast Iron 500~	Aluminum	Stainless Steels
			~HRC55 SKD61	~HRC55 SKD11					
○	○	◎	◎	◎					○

○:General Application ◎:The most suitable Application

■ Tolerance

D		D2
~ D6	0 ~ -0.012mm	h5
D8 ~ 12	0 ~ -0.015mm	



WE712+

2 FLUTES SQUARE RIB TYPE ENDMILL

- Optimal performance when machining high hardened material below 60 HRC
- Various shapes possible to machine due to wide selection of neck length
- Precision machining possible due to tighter tool tolerance

EDP No	D	L1	L3	L2	D2
WE71201050P	1	1.5	50	100	4
WE71201204P	1.2	1.8	4	50	4
WE71201206P	1.2	1.8	6	50	4
WE71201208P	1.2	1.8	8	50	4
WE71201210P	1.2	1.8	10	50	4
WE71201212P	1.2	1.8	12	50	4
WE71201214P	1.2	1.8	14	50	4
WE71201216P	1.2	1.8	16	50	4
WE71201220P	1.2	1.8	20	50	4
WE71201226P	1.2	1.8	26	60	4
WE71201230P	1.2	1.8	30	70	4
WE71201406P	1.4	2.1	6	50	4
WE71201408P	1.4	2.1	8	50	4
WE71201410P	1.4	2.1	10	50	4
WE71201414P	1.4	2.1	14	50	4
WE71201416P	1.4	2.1	16	50	4
WE71201420P	1.4	2.1	20	50	4
WE71201504P	1.5	2.3	4	50	4
WE71201505P	1.5	2.3	5	50	4
WE71201506P	1.5	2.3	6	50	4
WE71201507P	1.5	2.3	7	50	4
WE71201508P	1.5	2.3	8	50	4
WE71201510P	1.5	2.3	10	50	4
WE71201512P	1.5	2.3	12	50	4
WE71201514P	1.5	2.3	14	50	4
WE71201516P	1.5	2.3	16	50	4
WE71201518P	1.5	2.3	18	50	4
WE71201520P	1.5	2.3	20	50	4
WE71201522P	1.5	2.3	22	60	4
WE71201526P	1.5	2.3	26	60	4
WE71201530P	1.5	2.3	30	70	4
WE71201608P	1.6	2.3	8	50	4
WE71201610P	1.6	2.3	10	50	4
WE71201612P	1.6	2.3	12	50	4
WE71201616P	1.6	2.3	16	50	4
WE71201620P	1.6	2.3	20	50	4
WE71201808P	1.8	2.7	8	50	4
WE71201810P	1.8	2.7	10	50	4
WE71201812P	1.8	2.7	12	50	4
WE71201816P	1.8	2.7	16	50	4
WE71201820P	1.8	2.7	20	50	4
WE71202006P	2	3	6	50	4

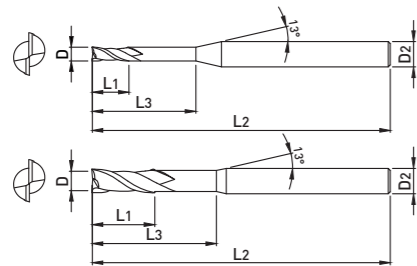
■ Applicable Working Material

Carbon Steels (S45C, S55C...) ~ HB225	Alloy Steels (SCM, SK...) HB22 ~ 325	Prehardened Steels(NAK...) HRC30~50	Hardened Steels		Copper	Graphite	Cast Iron 500~	Aluminum	Stainless Steels
			~HRC55 SKD61	~HRC55 SKD11					
○	○	◎	◎	◎					○

○:General Application ◎:The most suitable Application

■ Tolerance

D		D2
~ D6	0 ~ -0.012mm	h5
D8 ~ 12	0 ~ -0.015mm	



WE712+

2 FLUTES SQUARE RIB TYPE ENDMILL

- Optimal performance when machining high hardened material below 60 HRC
- Various shapes possible to machine due to wide selection of neck length
- Precision machining possible due to tighter tool tolerance

EDP No	D	L ₁	L ₃	L ₂	D ₂
WE71202008P	2	3	8	50	4
WE71202010P	2	3	10	50	4
WE71202012P	2	3	12	50	4
WE71202014P	2	3	14	50	4
WE71202016P	2	3	16	50	4
WE71202018P	2	3	18	50	4
WE71202020P	2	3	20	50	4
WE71202022P	2	3	22	60	4
WE71202026P	2	3	26	60	4
WE71202030P	2	3	30	70	4
WE71202035P	2	3	35	70	4
WE71202040P	2	3	40	80	4
WE71202045P	2	3	45	90	4
WE71202050P	2	3	50	100	4
WE71202060P	2	3	60	110	4
WE71202508P	2.5	4	8	50	4
WE71202510P	2.5	4	10	50	4
WE71202512P	2.5	4	12	50	4
WE71202514P	2.5	4	14	50	4
WE71202516P	2.5	4	16	50	4
WE71202518P	2.5	4	18	50	4
WE71202520P	2.5	4	20	50	4
WE71202522P	2.5	4	22	60	4
WE71202526P	2.5	4	26	60	4
WE71202530P	2.5	4	30	70	4
WE71202535P	2.5	4	35	70	4
WE71202540P	2.5	4	40	80	4
WE71202545P	2.5	4	45	90	4
WE71202550P	2.5	4	50	100	4
WE71203006P	3	4.5	6	50	6
WE71203008P	3	4.5	8	50	6
WE71203010P	3	4.5	10	50	6
WE71203012P	3	4.5	12	50	6
WE71203014P	3	4.5	14	60	6
WE71203016P	3	4.5	16	60	6
WE71203018P	3	4.5	18	60	6
WE71203020P	3	4.5	20	60	6
WE71203022P	3	4.5	22	65	6
WE71203026P	3	4.5	26	65	6
WE71203030P	3	4.5	30	70	6
WE71203035P	3	4.5	35	70	6
WE71203040P	3	4.5	40	80	6

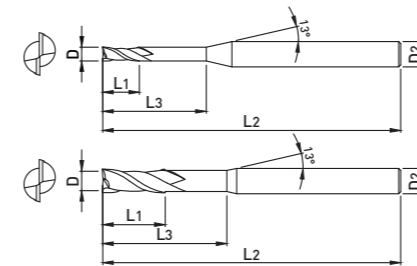
■ Applicable Working Material

Carbon Steels (S45C, S55C...) ~ HB225	Alloy Steels (SCM, SK...) HB22 ~ 325	Prehardened Steels(NAK...) HRC30~50	Hardened Steels		Copper	Graphite	Cast Iron 500~	Aluminum	Stainless Steels
			~HRC55 SKD61	~HRC55 SKD11					
○	○	◎	◎	◎					○

○:General Application ◎:The most suitable Application

■ Tolerance

D		D ₂
~ D6	0 ~ -0.012mm	h5
D8 ~ 12	0 ~ -0.015mm	



WE712+

2 FLUTES SQUARE RIB TYPE ENDMILL

- Optimal performance when machining high hardened material below 60 HRC
- Various shapes possible to machine due to wide selection of neck length
- Precision machining possible due to tighter tool tolerance

EDP No	D	L ₁	L ₃	L ₂	D ₂
WE71203045P	3	4.5	45	90	6
WE71203050P	3	4.5	50	100	6
WE71203060P	3	4.5	60	100	6
WE71204008P	4	6	8	50	6
WE71204010P	4	6	10	50	6
WE71204012P	4	6	12	50	6
WE71204014P	4	6	14	60	6
WE71204016P	4	6	16	60	6
WE71204018P	4	6	18	60	6
WE71204020P	4	6	20	60	6
WE71204022P	4	6	22	65	6
WE71204026P	4	6	26	65	6
WE71204030P	4	6	30	70	6
WE71204035P	4	6	35	70	6
WE71204040P	4	6	40	80	6
WE71204045P	4	6	45	90	6
WE71204050P	4	6	50	100	6
WE71204060P	4	6	60	100	6
WE71205016P	5	8	16	60	6
WE71205020P	5	8	20	60	6
WE71205026P	5	8	26	65	6
WE71205030P	5	8	30	70	6
WE71205035P	5	8	35	75	6
WE71205040P	5	8	40	80	6
WE71205050P	5	8	50	90	6
WE71205060P	5	8	60	100	6
WE71206015P	6	9	15	60	6
WE71206020P	6	9	20	60	6
WE71206030P	6	9	30	70	6
WE71206032P	6	9	32	90	6
WE71208025P	8	12	25	70	8
WE71208030P	8	12	30	80	8
WE71208042P	8	12	42	100	8
WE71210030P	10	15	30	75	10
WE71210035P	10	15	35	80	10
WE71210045P	10	15	45	100	10
WE71212035P	12	20	35	80	12
WE71212040P	12	20	40	90	12
WE71212050P	12	20	50	110	12

■ Applicable Working Material

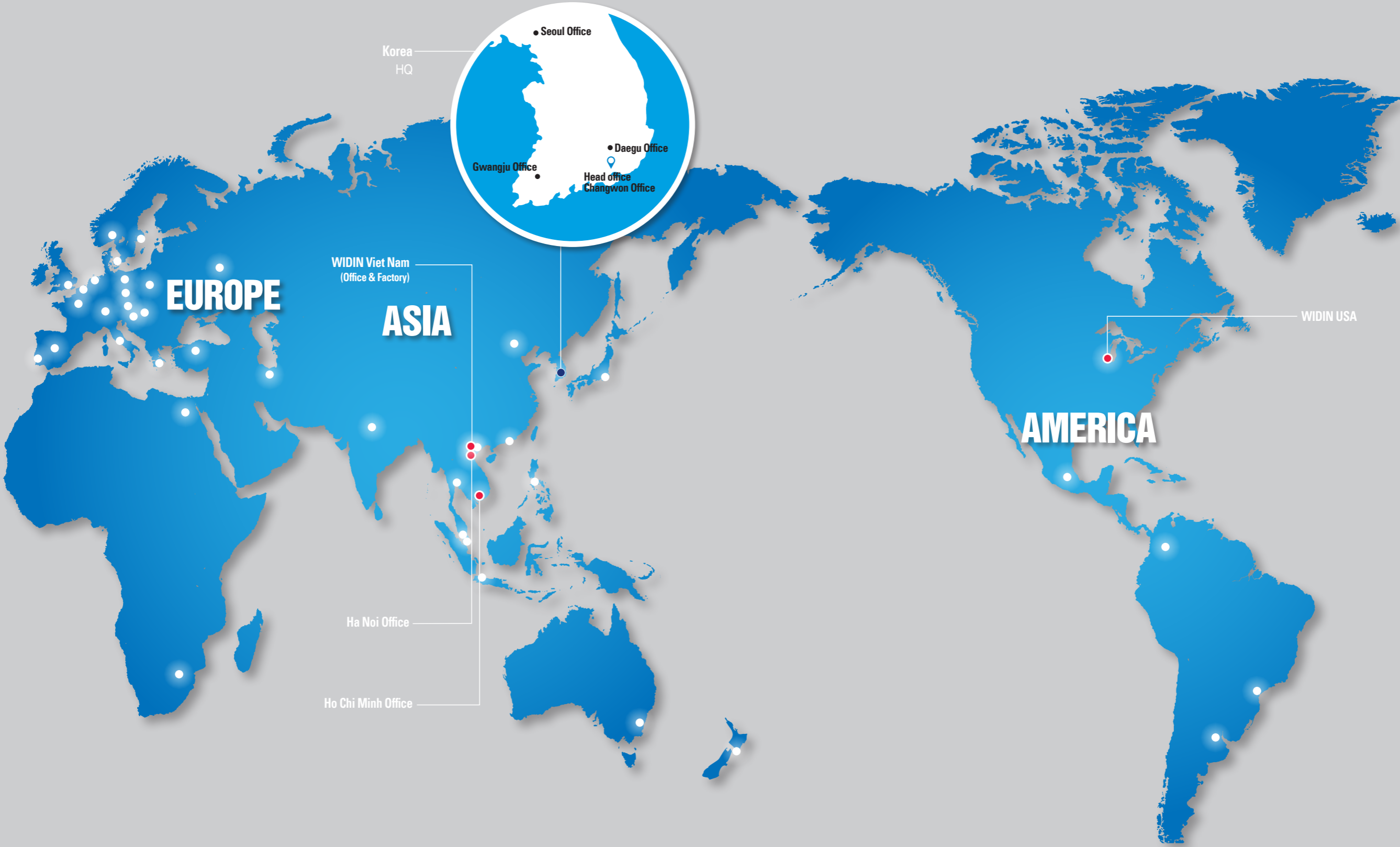
Carbon Steels (S45C, S55C...) ~ HB225	Alloy Steels (SCM, SK...) HB22 ~ 325	Prehardened Steels(NAK...) HRC30~50	Hardened Steels		Copper	Graphite	Cast Iron 500~	Aluminum	Stainless Steels
			~HRC55 SKD61	~HRC55 SKD11					
○	○	◎	◎	◎					○

○:General Application ◎:The most suitable Application

■ Tolerance

D		D ₂
~ D6	0 ~ -0.012mm	h5
D8 ~ 12	0 ~ -0.015mm	

GLOBAL NETWORK



2020.05



HEAD OFFICE & CHANGWON FACTORY

172, Sahwa-ro, Uichang-gu, Changwon-si, Gyeongsangnam-do,
Korea [51389]

TEL. +82-55-286-0905

FAX. +82-55-286-0978



USA OFFICE(CHICAGO)

1261 Wiley Rd. Unit F., Schaumburg, IL 60173, USA

TEL. +1-847-947-8320

FAX. +1-847-947-8322



WIDIN VIET NAM(OFFICE & FACTORY)

Lot CN5, Hop Thinh Industrial Zone, Hop Thinh Commune, Hiep Hoa District,
Bac Giang Province, Viet Nam

TEL. +84-20-4248-4883

Ha Noi Office

8th Floor-Hoang Ngoc Building, Lot C2C, Cau Giay Focus Areas of Infor-
mation Technology, Dich Vong Hau Ward, Cau Giay District, Ha Noi City,
Viet Nam

TEL. +84-24-6287-3828

Ho Chi Minh Office

4th Floor-Hai Au Building, 39B Truong Son, Ward 4, Tan Binh District, Ho Chi
Minh City, Viet Nam

TEL. +84-28-6297-3858