4G MILL END MILLS

PLAIN SHANK **SEMD98** SERIES

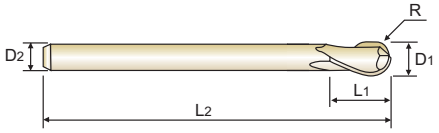
CARBIDE, 2 FLUTE BALL NOSE (Short, Regular, Long Shank)

VOLLHARTMETALL, 2 SCHNEIDEN STIRNRADIUS
Fraise carbure, 2 dents, hémisphérique
MD, 2 TAGLIENTI, SEMISFERICA (Serie corta, media e lunga)

- New coating and tool geometry applied resulting outstanding cutting abilities and wear resistance.
- With its unique ball nose geometry and cutting edges the cutting force has decreased, also increasing wear resistance.
- Excellent performance when cutting prehardened steels, up to HRc55 which are used for molds & dies.

- Aufgrund einer neuartigen Beschichtung und neuer Werkzeuggeometrien hervorragende Schnittleistung und Verschleißfestigkeit.
- Aufgrund der einzigartigen Kugelgeometrie und Schneidkantenpräparation wird die Schnittkraft reduziert und die Verschleißfestigkeit erhöht.
- Hervorragende Leistung bei der Zerspanung von vorvergüteten Stählen bis HRc55, welche im Werkzeug- und Formenbau Verwendung finden.





CARBIDE | 2 | 30° | R ±0.005 | R ±0.010 | PLAIN | Y Coating | p.C318~C319

R0.05~R3 R3.25~R12.5

Recommended ToolHolder	Flat Shank	Plain Shank
	END MILL HOLDER	HYDRAULIC CHUCK SHRINK FIT HOLDER
	-	POWER MILLING CHUCK
	-	ER COLLET CHUCK SK SLIM CHUCK

Unit : mm

EDP No.	Radius of Ball Nose R	Mill Diameter D1	Shank Diameter D2	Length of Cut L1	Overall Length L2	Remark
★ SEMD98001SE	R0.05	0.1	4	0.1	40	Short
★ SEMD98001E	R0.05	0.1	4	0.2	40	Regular
SEMD980013SE	R0.05	0.1	3	0.2	40	3mm Shank
SEMD980015SE	R0.075	0.15	4	0.15	40	Short
SEMD980015E	R0.075	0.15	4	0.3	40	Regular
SEMD9800153SE	R0.075	0.15	3	0.3	40	3mm Shank
★ SEMD98002SE	R0.1	0.2	4	0.2	40	Short
★ SEMD98002E	R0.1	0.2	4	0.4	40	Regular
SEMD980023SE	R0.1	0.2	3	0.4	40	3mm Shank
★ SEMD98003SE	R0.15	0.3	4	0.3	40	Short
★ SEMD98003E	R0.15	0.3	4	0.6	40	Regular
SEMD980033SE	R0.15	0.3	3	0.6	40	3mm Shank
SEMD98004SE	R0.2	0.4	4	0.4	40	Short
★ SEMD98004E	R0.2	0.4	4	0.8	40	Regular
SEMD980043SE	R0.2	0.4	3	0.8	40	3mm Shank
★ SEMD98005SE	R0.25	0.5	4	0.5	40	Short
SEMD98005S6SE	R0.25	0.5	6	0.8	40	-
★ SEMD98005E	R0.25	0.5	4	1.0	40	Regular
SEMD980053SE	R0.25	0.5	3	1.0	40	3mm Shank
SEMD98006SE	R0.3	0.6	4	0.6	40	Short
★ SEMD98006E	R0.3	0.6	4	1.2	40	Regular
SEMD980063SE	R0.3	0.6	3	1.2	40	3mm Shank
SEMD98007SE	R0.35	0.7	4	0.7	40	Short
★ SEMD98007E	R0.35	0.7	4	1.4	40	Regular

★ : Stock Item

▶ NEXT PAGE

Size	Radius Tolerance (mm)	Mill Dia. Tolerance (mm)	Shank Dia. Tolerance
up to R3	± 0.005	0 ~ - 0.012	h5
over R3	± 0.010	0 ~ - 0.015	

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend	○	○	○	◎	◎	○	◎	◎	◎	○	◎				○	○	○	○	○	○

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend																		○		◎	○

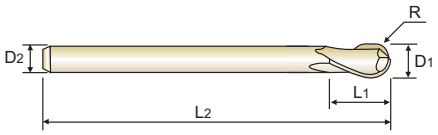
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CARBIDE | 2 | 30° | R ±0.005 | R ±0.010 | PLAIN | Y Coating | p.C318~C319

R0.05~R3 R3.25~R12.5

Recommended ToolHolder	Flat Shank	Plain Shank
	END MILL HOLDER	HYDRAULIC CHUCK SHRINK FIT HOLDER
	-	POWER MILLING CHUCK
	-	ER COLLET CHUCK SK SLIM CHUCK

Unit : mm

EDP No.	Radius of Ball Nose	Mill Diameter	Shank Diameter	Length of Cut	Overall Length	Remark
	R	D_1	D_2	L_1	L_2	
SEMD980073SE	R0.35	0.7	3	1.4	40	3mm Shank
SEMD98008SE	R0.4	0.8	4	0.8	40	Short
★ SEMD98008E	R0.4	0.8	4	1.6	40	Regular
SEMD980083SE	R0.4	0.8	3	1.6	40	3mm Shank
SEMD98009SE	R0.45	0.9	4	0.9	40	Short
★ SEMD98009E	R0.45	0.9	4	1.8	40	Regular
SEMD980093SE	R0.45	0.9	3	1.8	40	3mm Shank
SEMD98010040E	R0.5	1.0	6	1.5	40	Short
SEMD980103SE	R0.5	1.0	3	2.5	50	3mm Shank
SEMD98010S4SE	R0.5	1.0	4	1.5	40	-
★ SEMD980104SE	R0.5	1.0	4	2.5	50	Regular
★ SEMD98010E	R0.5	1.0	6	2.5	50	Regular
★ SEMD98010070E	R0.5	1.0	6	2.5	70	Long Shank
SEMD98010100E	R0.5	1.0	6	2.5	100	Long Shank
SEMD98012040E	R0.6	1.2	6	2	40	Short
SEMD980123SE	R0.6	1.2	3	3	50	3mm Shank
SEMD980124SE	R0.6	1.2	4	3	50	Regular
★ SEMD98012E	R0.6	1.2	6	3	50	Regular
SEMD98012070E	R0.6	1.2	6	3	70	Long Shank
SEMD98012100E	R0.6	1.2	6	3	100	Long Shank
SEMD98015040E	R0.75	1.5	6	2.5	40	Short
SEMD980153SE	R0.75	1.5	3	4	50	3mm Shank
★ SEMD980154SE	R0.75	1.5	4	4	50	Regular
★ SEMD98015E	R0.75	1.5	6	4	50	Regular

★ : Stock Item

▶ NEXT PAGE

Size	Radius Tolerance (mm)	Mill Dia. Tolerance (mm)	Shank Dia. Tolerance
up to R3	± 0.005	0 ~ - 0.012	h5
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Recommend	○	○	○	◎	◎	○	◎	◎	◎	○	◎				○	○	○	○	○	○

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
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HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend																		○		◎	○

4G MILL END MILLS

PLAIN SHANK **SEMD98** SERIES

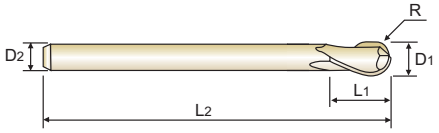
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R0.05~R3 R3.25~R12.5

Recommended ToolHolder	Flat Shank	Plain Shank
	END MILL HOLDER	HYDRAULIC CHUCK SHRINK FIT HOLDER
	-	POWER MILLING CHUCK
	-	ER COLLET CHUCK SK SLIM CHUCK

Unit : mm

EDP No.	Radius of Ball Nose R	Mill Diameter D1	Shank Diameter D2	Length of Cut L1	Overall Length L2	Remark
★ SEMD98015070E	R0.75	1.5	6	4	70	Long Shank
SEMD98015100E	R0.75	1.5	6	4	100	Long Shank
★ SEMD98020040E	R1.0	2.0	6	3	40	Short
SEMD980203SE	R1.0	2.0	3	5	50	3mm Shank
★ SEMD980204SE	R1.0	2.0	4	5	50	Regular
★ SEMD98020E	R1.0	2.0	6	5	50	Regular
★ SEMD98020080E	R1.0	2.0	6	5	80	Long Shank
SEMD98020100E	R1.0	2.0	6	5	100	Long Shank
SEMD98025040E	R1.25	2.5	6	4	40	Short
SEMD980253SE	R1.25	2.5	3	6	60	3mm Shank
★ SEMD980254SE	R1.25	2.5	4	6	60	Regular
★ SEMD98025E	R1.25	2.5	6	6	60	Regular
★ SEMD98025080E	R1.25	2.5	6	6	80	Long Shank
SEMD98025100E	R1.25	2.5	6	6	100	Long Shank
★ SEMD98030040E	R1.5	3.0	6	4.5	40	Short
SEMD980303SE	R1.5	3.0	3	6	60	3mm Shank
★ SEMD980304SE	R1.5	3.0	4	6	60	Regular
★ SEMD98030E	R1.5	3.0	6	6	60	Regular
★ SEMD98030080E	R1.5	3.0	6	6	80	Long Shank
★ SEMD98030100E	R1.5	3.0	6	6	100	Long Shank
★ SEMD98035E	R1.75	3.5	6	8	70	-
★ SEMD98040050E	R2.0	4.0	6	6	50	Short
★ SEMD980404SE	R2.0	4.0	4	8	70	Regular
★ SEMD98040E	R2.0	4.0	6	8	70	Regular

★ : Stock Item

▶ NEXT PAGE

Size	Radius Tolerance (mm)	Mill Dia. Tolerance (mm)	Shank Dia. Tolerance
up to R3	± 0.005	0 ~ - 0.012	h5
over R3	± 0.010	0 ~ - 0.015	

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ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
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HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend	○	○	○	◎	◎	○	◎	◎	◎	○	◎				○	○	○	○	○	○

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
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HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend																		○		◎	○

phone:+82-32-526-0909, www.yg1.solutions, E-mail:yg1@yg1.solutions
YG-1 CO., LTD.

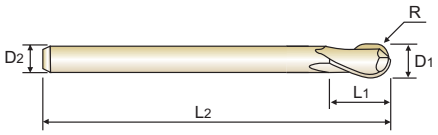
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CARBIDE | 2 | 30° | R ±0.005 | R ±0.010 | PLAIN | Y Coating | p.C318~C319

R0.05~R3 R3.25~R12.5

Recommended ToolHolder	Flat Shank	Plain Shank
	END MILL HOLDER	HYDRAULIC CHUCK SHRINK FIT HOLDER
	-	POWER MILLING CHUCK
	-	ER COLLET CHUCK SK SLIM CHUCK

Unit : mm

EDP No.	Radius of Ball Nose	Mill Diameter	Shank Diameter	Length of Cut	Overall Length	Remark
	R	D1	D2	L1	L2	
★ SEMD980401004SE	R2.0	**4.0**	4	8	100	Long Shank
SEMD980401204SE	R2.0	**4.0**	4	8	120	Long Shank
★ SEMD98040100E	R2.0	**4.0**	6	8	100	Long Shank
★ SEMD98040120E	R2.0	**4.0**	6	8	120	Long Shank
★ SEMD98045E	R2.25	**4.5**	6	9	80	-
★ SEMD98050060E	R2.5	**5.0**	6	7.5	60	Short
★ SEMD98050E	R2.5	**5.0**	6	10	80	Regular
SEMD980505SE	R2.5	**5.0**	5	10	80	5mmShank
★ SEMD98055E	R2.75	**5.5**	6	11	90	-
★ SEMD98060050E	R3.0	**6.0**	6	9	50	Short
★ SEMD98060060E	R3.0	**6.0**	6	9	60	Short
★ SEMD98060080E	R3.0	**6.0**	6	9	80	Short
★ SEMD98060E	R3.0	**6.0**	6	12	90	Regular
★ SEMD98060110E	R3.0	**6.0**	6	12	110	Long Shank
★ SEMD98060130E	R3.0	**6.0**	6	12	130	Long Shank
★ SEMD98060150E	R3.0	**6.0**	6	12	150	Long Shank
★ SEMD98065E	R3.25	**6.5**	8	13	90	-
★ SEMD98070E	R3.5	**7.0**	8	14	90	-
★ SEMD98080050E	R4.0	**8.0**	8	12	50	Short
★ SEMD98080060E	R4.0	**8.0**	8	12	60	Short
★ SEMD98080080E	R4.0	**8.0**	8	12	80	Short
★ SEMD98080090E	R4.0	**8.0**	8	12	90	Short
★ SEMD98080E	R4.0	**8.0**	8	14	100	Regular
★ SEMD98080130E	R4.0	**8.0**	8	14	130	Long Shank

★ : Stock Item

▶ NEXT PAGE

Size	Radius Tolerance (mm)	Mill Dia. Tolerance (mm)	Shank Dia. Tolerance
up to R3	± 0.005	0 ~ - 0.012	h5
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HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend	○	○	○	◎	◎	○	◎	◎	◎	○	◎				○	○	○	○	○	○

ISO	N										S							H			
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HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend																		○		◎	○

4G MILL END MILLS

PLAIN SHANK **SEMD98** SERIES

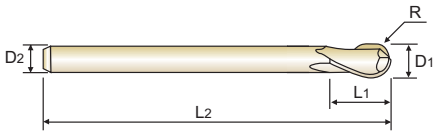
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R0.05~R3 R3.25~R12.5

Recommended ToolHolder

	Flat Shank	Plain Shank
◎	END MILL HOLDER	HYDRAULIC CHUCK SHRINK FIT HOLDER
◎	-	POWER MILLING CHUCK
○	-	ER COLLET CHUCK SK SLIM CHUCK

Unit : mm

EDP No.	Radius of Ball Nose R	Mill Diameter D1	Shank Diameter D2	Length of Cut L1	Overall Length L2	Remark
★ SEMD98080150E	R4.0	**8.0**	8	14	150	Long Shank
★ SEMD98085E	R4.25	**8.5**	10	16	100	-
★ SEMD98090E	R4.5	**9.0**	10	18	100	-
SEMD98100050E	R5.0	**10.0**	10	15	50	Short
★ SEMD98100060E	R5.0	**10.0**	10	15	60	Short
★ SEMD98100080E	R5.0	**10.0**	10	15	80	Short
★ SEMD98100090E	R5.0	**10.0**	10	15	90	Short
★ SEMD98100E	R5.0	**10.0**	10	18	100	Regular
★ SEMD98100130E	R5.0	**10.0**	10	18	130	Long Shank
★ SEMD98100150E	R5.0	**10.0**	10	18	150	Long Shank
★ SEMD98100180E	R5.0	**10.0**	10	18	180	Long Shank
SEMD98100200E	R5.0	**10.0**	10	18	200	Long Shank
★ SEMD98110E	R5.5	**11.0**	12	20	100	-
SEMD98120060E	R6.0	**12.0**	12	18	60	Short
★ SEMD98120080E	R6.0	**12.0**	12	18	80	Short
SEMD98120090E	R6.0	**12.0**	12	18	90	Short
★ SEMD98120100E	R6.0	**12.0**	12	18	100	Short
★ SEMD98120E	R6.0	**12.0**	12	22	110	Regular
★ SEMD98120130E	R6.0	**12.0**	12	22	130	Long Shank
★ SEMD98120150E	R6.0	**12.0**	12	22	150	Long Shank
★ SEMD98120180E	R6.0	**12.0**	12	22	180	Long Shank
★ SEMD98120200E	R6.0	**12.0**	12	22	200	Long Shank
★ SEMD98130E	R6.5	**13.0**	12	24	100	-
★ SEMD98140E	R7.0	**14.0**	12	26	100	Regular

★ : Stock Item

▶ NEXT PAGE

Size	Radius Tolerance (mm)	Mill Dia. Tolerance (mm)	Shank Dia. Tolerance
up to R3	± 0.005	0 ~ - 0.012	h5
over R3	± 0.010	0 ~ - 0.015	

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend	○	○	○	◎	◎	○	◎	◎	◎	○	◎				○	○	○	○	○	○

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend																		○		◎	○

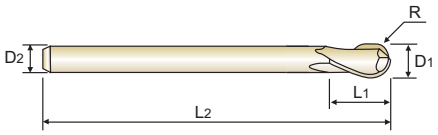
CARBIDE, 2 FLUTE BALL NOSE (Short, Regular, Long Shank)

VOLLHARTMETALL, 2 SCHNEIDEN STIRNRADIUS
Fraise carbure, 2 dents, hémisphérique
MD, 2 TAGLIENTI, SEMISFERICA (Serie corta, media e lunga)

- New coating and tool geometry applied resulting outstanding cutting abilities and wear resistance.
- With its unique ball nose geometry and cutting edges the cutting force has decreased, also increasing wear resistance.
- Excellent performance when cutting prehardened steels, up to HRc55 which are used for molds & dies.

- Aufgrund einer neuartigen Beschichtung und neuer Werkzeuggeometrien hervorragende Schnittleistung und Verschleißfestigkeit.
- Aufgrund der einzigartigen Kugelgeometrie und Schneidkantenpräparation wird die Schniitkraft reduziert und die Verschleißfestigkeit erhöht.
- Hervorragende Leistung bei der Zerspanung von vorvergüteten Stählen bis HRc55, welche im Werkzeug- und Formenbau Verwendung finden.





CARBIDE | 2 | 30° | R ±0.005 | R ±0.010 | PLAIN | Y Coating | p.C318~C319

R0.05~R3 R3.25~R12.5

Recommended ToolHolder

	Flat Shank	Plain Shank
◎	END MILL HOLDER	HYDRAULIC CHUCK SHRINK FIT HOLDER
◎	-	POWER MILLING CHUCK
○	-	ER COLLET CHUCK SK SLIM CHUCK

Unit : mm

EDP No.	Radius of Ball Nose	Mill Diameter	Shank Diameter	Length of Cut	Overall Length	Remark
	R	D1	D2	L1	L2	
★ SEMD9814014SE	R7.0	**14.0**	14	26	100	-
SEMD9814016SE	R7.0	**14.0**	16	26	100	-
SEMD98150E	R7.5	**15.0**	16	28	140	-
★ SEMD98160100E	R8.0	**16.0**	16	24	100	Short
SEMD98160130E	R8.0	**16.0**	16	24	130	Short
★ SEMD98160E	R8.0	**16.0**	16	30	150	Regular
SEMD98160180E	R8.0	**16.0**	16	30	180	Long Shank
★ SEMD98160200E	R8.0	**16.0**	16	30	200	Long Shank
★ SEMD98180E	R9.0	**18.0**	16	34	150	Regular
SEMD9818018SE	R9.0	**18.0**	18	34	150	-
★ SEMD98200100E	R10.0	**20.0**	20	30	100	Short
SEMD98200130E	R10.0	**20.0**	20	30	130	Short
★ SEMD98200E	R10.0	**20.0**	20	38	150	Regular
SEMD98200200E	R10.0	**20.0**	20	38	200	Long Shank
SEMD98250120E	R12.5	**25.0**	25	50	120	Short
SEMD98250E	R12.5	**25.0**	25	50	180	Regular

★ : Stock Item

Size	Radius Tolerance (mm)	Mill Dia. Tolerance (mm)	Shank Dia. Tolerance
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◎ : Excellent ○ : Good

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HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend	○	○	○	◎	◎	○	◎	◎	◎	○	◎				○	○	○	○	○	○

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend																		○		◎	○