

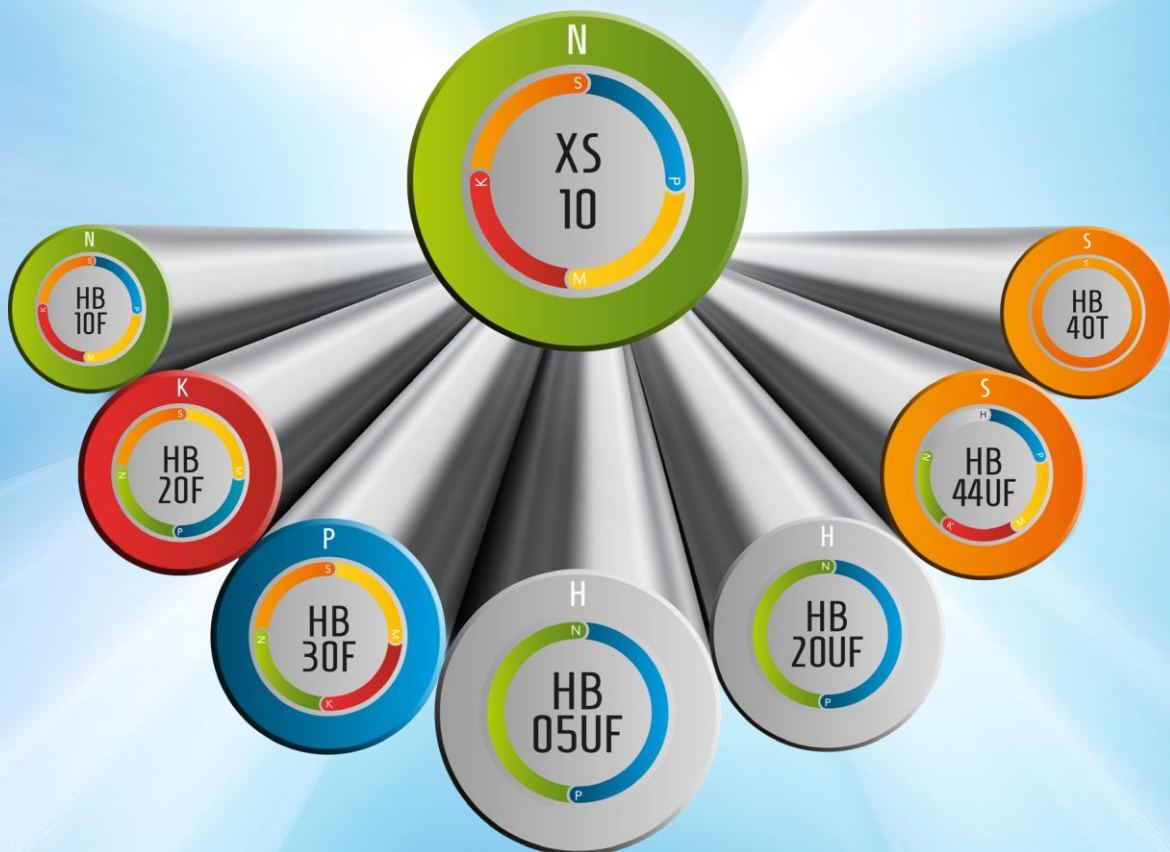
boehlerit

Carbide blanks and semi-finished products

for manufacturers of precision tools

鎢鋼毛坯和半成品

精密刀具製造商專用



Boehlerit 鎢鋼和刀具為金屬、木材、塑膠和複合材料的加工樹立了標準。來自施蒂利亞州鋼鐵城卡普芬貝格的切削材料和刀具專家憑藉「靠近鋼鐵實驗室」的優勢解決了未來材料中最苛刻的加工任務。切削材料、半成品和精密刀具以及銑削、車削、鑽孔和成型的刀具系統確保全球製程的可靠性和效率。Boehlerit 的綜合產品系列還包括用於曲軸加工和用於旋轉剝皮、管材和板材加工以及重型加工的冶金技術的高度專業化的刀具。

Boehlerit 的另一個優點是用於結構部件和磨損保護的鎢鋼。Boehlerit 也在塗層技術領域創造了全球獨一無二的地位，從世界上第一個奈米CVD結合層到最硬的鑽石層。此外，Boehlerit 憑藉其在冶金學、塗層技術和最先進壓制技術方面的多年專業知識，成為刀具製造商稱職的開發合作夥伴。

Boehlerit 品牌成立於 1932 年，主要為杜塞爾多夫鋼鐵製造商 Böhler 生產鎢鋼。1950 年，第二家鎢鋼生產工廠在奧地利卡普芬貝格（Boehlerit 集團現總部）開始建造。目前，Boehlerit 在德國、西班牙、土耳其、匈牙利、捷克共和國、斯洛伐克、中國、美國、波蘭、巴西和墨西哥也設有生產和銷售辦事處。與其他獨家銷售合作夥伴以及 Bilz 集團一起，Boehlerit 的業務範圍遍布幾乎所有大洲的 40 多個工業化國家。

自 1991 年起，Boehlerit 一直是德國上科亨 Leitz 集團的一部分，因此也是現今的布魯克拉赫家族企業集團（Bilz、Boehlerit 和 Leitz）的一部分，該集團在全球擁有 4000 名員工。800 名經驗豐富的員工（卡普芬貝格工廠有 500 名）為 Boehlerit 集團創造約 1.1 億歐元的年營業額。Boehlerit 將其中 5% 直接投資於研發。採用最新的分析方法，並與大學和研究機構密切合作，基於切削和磨損保護材料鎢鋼不斷開發新產品。這使得 Boehlerit 創新工廠成為在嚴苛的應用領域提供客戶特定解決方案和服務的領先國際供應商之一。



Kapfenberg in der Steiermark / **ÖSTERREICH** in Styria / **AUSTRIA**

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Carbides and tools from Boehlerit are the pace-setters for new standards in the machining of metal, wood, synthetic and composite materials. The cutting materials and tools specialist from the steel town Kapfenberg in Styria has the answers for the most challenging machining tasks for materials of the future with its direct line to the 'steel lab'. Reliable and efficient processes are ensured worldwide with cutting materials, semi-finished products, precision tools and tooling systems for milling, turning, drilling and forming. The comprehensive Boehlerit product range includes highly specialised tools for crankshaft machining, tube and pipe machining, bar peeling and heavy-duty machining operations in the steel industry. Further Boehlerit strengths include carbides for structural components and for wear-protection. In coating technology, Boehlerit achieved a world first and unique positioning globally with its Nano CVD bonding layer through to the hardest diamond coatings. Added to this, Boehlerit is the expert development partner for tool-makers with its unrivalled know-how and many years of mastery in metallurgy, coatings systems and the latest pressing technologies.

The Boehlerit brand was established in 1932 for the carbide production of the Böhler Steelworks in Dusseldorf, Germany. A second carbide production centre was established at Kapfenberg/Austria in 1950, at what is now the world headquarters of the Boehlerit Group. Boehlerit today has production and sales locations in Germany, Spain, Turkey, Hungary, the Czech Republic, Slovakia, China, the USA, Poland, Brazil and Mexico. Boehlerit is at home on virtually every continent and in 40 leading industrial nations working hand-in-hand with exclusive sales partners and its partners in the Bilz Group.

Since 1991, Boehlerit has been a part of the Leitz Corporate Group in Oberkochen/Germany and is thus a part of the group of companies owned by the Brucklacher family (Bilz, Boehlerit and Leitz). Boehlerit employs 800 experienced employees (500 in Kapfenberg) 4,000 worldwide in the Leitz Corporate Group. 5 % of its annual turnover of around 110 million euros in the Boehlerit Group is invested directly in research and development every year. Using state-of-the-art analytical methods and profiting from its close cooperation with universities and research institutes, Boehlerit generates a constant flow of new products and solutions revolving around carbides and their use for cutting and wear-protection. All of this has made the innovation factory Boehlerit one of the world's leading providers of customised solutions and services for industries with the most demanding applications.

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Zertifikat EN ISO 9001:2015



Certificate EN ISO 9001:2015



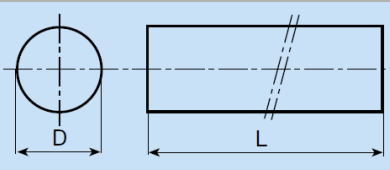
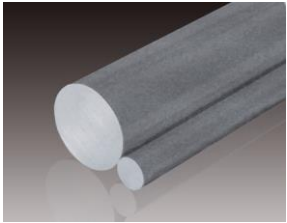
Zertifikat EN ISO 14001:2015



Certificate EN ISO 14001:2015

圓棒, 燒結, B94
Rods, as sintered, B94

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	Bestellbezeichnung Ordering code	D [mm]	L [mm]	XS10	HB10F	HB20F	HB30F	HB40T
	DM 2,2 x 330	2,2	330			6403660*	6403661	
	DM 2,7 x 330	2,7	330			6403684*	6403685	
	DM 3,25 x 330	3,25	330		6403712*	6403713*	6403714	
	DM 3,7 x 330	3,7	330			6403721*	6403722	
	DM 4,2 x 330	4,2	330	5172482	6403736*	6403737*	6403738	5092344
	DM 4,7 x 330	4,7	330		6403745*	6403746*	6403747	
	DM 5,2 x 330	5,2	330	5172483	6403763*	6403764*	6403765	5092354
	DM 5,7 x 330	5,7	330		6403773*	6403774*	6403775	
	DM 6,2 x 330	6,2	330	5172484	6403792	6403793	6403794	5092356
	DM 6,7 x 330	6,7	330		6403803	6403804*	6403805	
	DM 7,2 x 330	7,2	330		6403811*	6403812*	6403813	
	DM 7,7 x 330	7,7	330			6403818*	6403819	
	DM 8,2 x 330	8,2	330	5172485	6403835	6403836	6403837	5092350
	DM 8,7 x 330	8,7	330			6403845*	6403846	
	DM 9,2 x 330	9,2	330		6411794*	6403851*	6403852	
	DM 9,7 x 330	9,7	330			6403857*	6403858	
	DM 10,2 x 330	10,2	330	5172486	6403513	6403514	6403515	5092358
	DM 10,7 x 330	10,7	330			6403523*	6403524	
	DM 11,2 x 330	11,2	330			6403529*	6403530	
	DM 11,7 x 330	11,7	330			6403535*	6403536	
	DM 12,2 x 330	12,2	330	5172487	6403549	6403550	6403551	5092359
	DM 12,7 x 330	12,7	330			6403557*	6403558	
	DM 13,2 x 330	13,2	330			6403561*	6403562	
	DM 14,2 x 330	14,2	330		6403579*	6403580*	6403581	5092360
	DM 14,7 x 330	14,7	330			6414026*	6403587	
	DM 15,2 x 330	15,2	330			6403590*	6403591	
	DM 16,2 x 330	16,2	330		6403605*	6403606	6403607	5092361
	DM 17,2 x 330	17,2	330			6403613*	6403614	
	DM 18,2 x 330	18,2	330		6403622*	6403623	6403624	
	DM 19,2 x 330	19,2	330			6403630*	6403631	
	DM 20,2 x 330	20,2	330		6403648*	6403649	6403650	
	DM 21,2 x 330	21,2	330				5089006	
	DM 22,2 x 330	22,2	330				5089008	
	DM 23,2 x 330	23,2	330				5089010	
	DM 24,2 x 330	24,2	330				5089012	
	DM 25,2 x 330	25,2	330				9179494	
	DM 26,2 x 330	26,2	330				5089015	
	DM 28,2 x 330	28,2	330				5089016	
	DM 30,2 x 330	30,2	330				5089017	
	DM 32,2 x 330	32,2	330				5041689	
DM 34,2 x 330	34,2	330				5089022		
DM 36,2 x 330	36,2	330				5089023		
DM 38,2 x 330	38,2	330				5089028		
DM 40,2 x 330	40,2	330				5089032		

Erklärung legend

DM = Durchmesser diameter

Stäbe ab Lager verfügbar Rods available from stock
* Lieferzeit auf Anfrage Delivery time on request

圓棒, 研磨 h6, B90
Rods, ground h6, B90



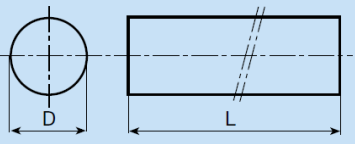
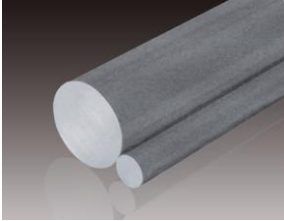
	Bestellbezeichnung Ordering code	D [mm]	L [mm]	XS10	HB10F	HB20F	HB30F	HB40T
	DM 2h6 x 330	2,0	330			6403632*	6403633	
	DM 2,5h6 x 330	2,5	330				6403676	
	DM 3h6 x 330	3,0	330		6403698*	6403699*	6403700	
	DM 3,5h6 x 330	3,5	330				6403717	
	DM 4h6 x 330	4,0	330	5172475	6403728*	6403729*	6403730	
	DM 4,5h6 x 330	4,5	330				6403742*	
	DM 5h6 x 330	5,0	330	5172476	6403755*	6403756*	6403757	
	DM 5,5h6 x 330	5,5	330				6403769	
	DM 6h6 x 330	6,0	330	5172477	6403782	6403783	6403784	
	DM 6,5h6 x 330	6,5	330				6403799	
	DM 7h6 x 330	7,0	330		5083207*		6403807	
	DM 7,5h6 x 330	7,5	330				6403815	
	DM 8h6 x 330	8,0	330	5172478	6403826	6403827	6403828	
	DM 8,5h6 x 330	8,5	330				6403842*	
	DM 9h6 x 330	9,0	330				6403848	
	DM 9,5h6 x 330	9,5	330				6403854	
	DM 10h6 x 330	10,0	330	5172479	6403504	6403505	6403506	
	DM 10,5h6 x 330	10,5	330				6403520*	
	DM 11h6 x 330	11,0	330				6403526	
	DM 11,5h6 x 330	11,5	330				6403532*	
	DM 12h6 x 330	12,0	330	5172480	6403543	6403544	6403545	
	DM 12,5h6 x 330	12,5	330				6403556*	
	DM 13h6 x 330	13,0	330				6403560	
	DM 14h6 x 330	14,0	330		6403573*	6403574	6403575	
	DM 15h6 x 330	15,0	330				6403589	
	DM 16h6 x 330	16,0	330		6403599*	6403600	6403601	
	DM 17h6 x 330	17,0	330				6403612	
	DM 18h6 x 330	18,0	330		6410377*		6403618	
	DM 19h6 x 330	19,0	330				6403629	
	DM 20h6 x 330	20,0	330		6403643*	6403644	6403645	
	DM 21h6 x 330	21,0	330				5089092	
	DM 22h6 x 330	22,0	330				5089094	
	DM 23h6 x 330	23,0	330				5089095	
	DM 24h6 x 330	24,0	330				5089096	
	DM 25h6 x 330	25,0	330				5089098	
	DM 26h6 x 330	26,0	330				5089107	
	DM 28h6 x 330	28,0	330				5089108	
	DM 30h6 x 330	30,0	330				5089109	
	DM 32h6 x 330	32,0	330				5089110	
	DM 34h6 x 330	34,0	330				5089111	
DM 36h6 x 330	36,0	330				5089112		
DM 38h6 x 330	38,0	330				5089113		
DM 40h6 x 330	40,0	330				5089114		

Erklärung legend

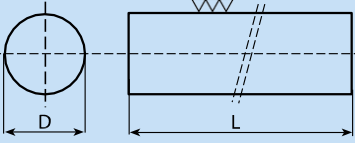

DM = Durchmesser diameter

Stäbe ab Lager verfügbar Rods available from stock
* Lieferzeit auf Anfrage Delivery time on request

圓棒, 燒結, 尺寸以英吋為單位, B94
Rods, as sintered, dimensions in inches, B94

	Bestellbezeichnung Ordering code	D Zoll/Inch	D [mm]	L [mm]	HB30F
 <p>Zollabmessungen mit Schleifzugabe Inch sizes with grinding allowance</p>	DM 3/16" x 330	0,197	5,00	330	6403692*
	DM 1/4" x 330	0,258	6,55	330	6403495*
	DM 1/2" x 330	0,510	12,95	330	6403491*
Erklärung legend	DM = Durchmesser diameter				

圓棒, 研磨 h6, 尺寸以英吋為單位, B90
Rods, ground h6, dimensions in inches, B90

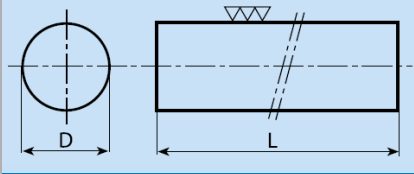
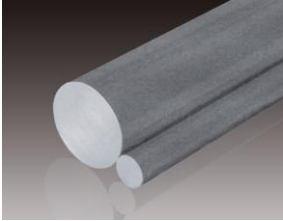
	Bestellbezeichnung Ordering code	D Zoll/Inch	D [mm]	L [mm]	HB30F
	DM 1/8" h6 x 330	0,125	3,175	330	6403497
	DM 3/16" h6 x 330	0,1875	4,763	330	6403690
	DM 1/4" h6 x 330	0,25	6,350	330	6403493
	DM 5/16" h6 x 330	0,3125	7,938	330	6403749
	DM 3/8" h6 x 330	0,375	9,252	330	6403694
	DM 7/16" h6 x 330	0,4375	11,113	330	5020514
	DM 1/2" h6 x 330	0,5	12,700	330	6403490
	DM 9/16" h6 x 330	0,6	14,288	330	5050869
	DM 5/8" h6 x 330	0,625	15,875	330	5020516
	DM 3/4" h6 x 330	0,75	19,050	330	9177757
	DM 7/8" h6 x 330	0,88	22,225	330	5050865
	DM 1" h6 x 310	1,000	25,400	310	5020519
Erklärung legend	DM = Durchmesser diameter				

Stäbe ab Lager verfügbar Rods available from stock
* Lieferzeit auf Anfrage Delivery time on request

用於 HSC 加工的超細晶粒圓棒, 燒結, B94

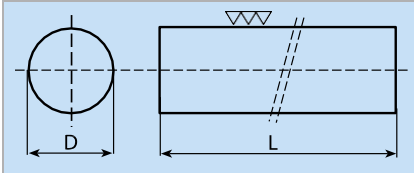
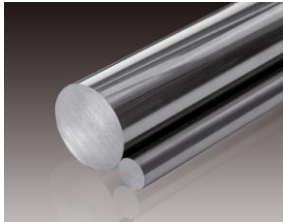
Rods in ultrafine grain quality for HSC applications, as sintered, B94



	Bestellbezeichnung Ordering code	D [mm]	L [mm]	HB20UF	HB44UF
	DM 3,3 x 330	3,30	330	6410765	6403715
	DM 4,3 x 330	4,30	330	6410776	6403740
	DM 5,3 x 330	5,30	330	6410779	6403767
	DM 6,3 x 330	6,30	330	6410783	6403797
	DM 8,3 x 330	8,30	330	6410788	6403840
	DM 10,3 x 330	10,30	330	6410739	6403518
	DM 12,3 x 330	12,30	330	6410744	6403554
	DM 14,3 x 330	14,30	330	6410748	6403584
	DM 16,3 x 330	16,30	330	6410752	6403610
	DM 18,3 x 330	18,30	330	6410756	6403627
	DM 20,3 x 330	20,30	330	6410760	6403653
	DM 25,3 x 310	25,30	310		6410762
	Erklärung legend	DM = Durchmesser diameter			

用於 HSC 加工的超細晶粒圓棒, 研磨 h6, B90

Rods in ultrafine grain quality for HSC applications, ground h6, B90

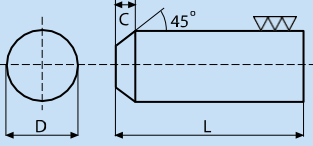
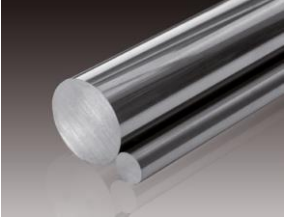
	Bestellbezeichnung Ordering code	D [mm]	L [mm]	HB20UF	HB44UF
	DM 3h6 x 330	3,00	330	6410763	6403701
	DM 4h6 x 330	4,00	330	6410772	6403731
	DM 5h6 x 330	5,00	330	6410777	6403758
	DM 6h6 x 330	6,00	330	6410781	6403785
	DM 8h6 x 330	8,00	330	6410785	6403829
	DM 10h6 x 330	10,00	330	6410737	6403507
	DM 12h6 x 330	12,00	330	6410742	6403546
	DM 14h6 x 330	14,00	330	6410747	6403576
	DM 16h6 x 330	16,00	330	6410751	6403602
	DM 18h6 x 330	18,00	330	6410755	6403619
	DM 20h6 x 330	20,00	330	6410759	6403646
	DM 25h6 x 310	25,00	310		6410761
	Erklärung legend	DM = Durchmesser diameter			

Stäbe ab Lager verfügbar Rods available from stock
* Lieferzeit auf Anfrage Delivery time on request

整體鎢鋼刀柄刀具半成品, 已研磨 h6, B91

DIN standard mill blanks, ground h6, with chamfer, B91

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	Bestellbezeichnung Ordering code	D [mm]	L [mm]	C [mm]	HB30F
	DM 4h6 x 51F	4,00	51	0,40	6403732
	DM 5h6 x 51F	5,00	51	0,40	6403759
	DM 6h6 x 51F	6,00	51	0,50	6403786
	DM 6h6 x 55F	6,00	55	0,50	6403787
	DM 6h6 x 58F	6,00	58	0,50	6403788
	DM 8h6 x 59F	8,00	59	0,50	6403830*
	DM 8h6 x 64F	8,00	64	0,50	6403831
	DM 10h6 x 67F	10,00	67	0,50	6403508
	DM 10h6 x 73F	10,00	73	0,50	6403509
	DM 12h6 x 74F	12,00	74	0,60	6403547*
	DM 12h6 x 84F	12,00	84	0,60	6403548
	DM 14h6 x 76F	14,00	76	0,80	6403577*
	DM 14h6 x 84F	14,00	84	0,80	6403578
	DM 16h6 x 83F	16,00	83	0,80	6403603
	DM 16h6 x 93F	16,00	93	0,80	6403604
	DM 16h6 x 125F	16,00	125	0,80	6403594
	DM 16h6 x 150F	16,00	150	0,80	6403595*
	DM 18h6 x 85F	18,00	85	1,00	6403620*
	DM 18h6 x 93F	18,00	93	1,00	6403621
	DM 20h6 x 93F	20,00	93	1,00	6403647
	DM 20h6 x 105F	20,00	105	1,00	6403637
	DM 20h6 x 125F	20,00	125	1,00	6403638
	DM 20h6 x 150F	20,00	150	1,00	6403639
	DM 25h6 x 122F	25,00	122	1,00	6403671
DM 25h6 x 150F	25,00	150	1,00	6403672	

Erklärung legend

DM = Durchmesser diameter / F = Fase chamfer

Stäbe ab Lager verfügbar Rods available from stock
 * Lieferzeit auf Anfrage Delivery time on request

帶冷卻孔的圓棒, 燒結, B96

Rods with one straight coolant channel, as sintered, B96



		Bestellbezeichnung Ordering code	D [mm]	L [mm]	d [mm]	HB20F
DMG1 	DMG1 6,2/1,0 x 330	6,20	330	1,00	6403443	
	DMG1 8,2/1,3 x 330	8,20	330	1,30	6403445	
	DMG1 10,2/2,0 x 330	10,20	330	2,00	6403431	
	DMG1 12,2/2,0 x 330	12,20	330	2,00	6403433	
	DMG1 14,2/2,0 x 330	14,20	330	2,00	6403435	
	DMG1 16,2/2,0 x 330	16,20	330	2,00	6403437	
	DMG1 18,2/3,0 x 330	18,20	330	3,00	6403439	
	DMG1 20,2/3,0 x 330	20,20	330	3,00	6403441	
Erklärung legend		DM = Durchmesser diameter / G1 = 1 gerader Kühlkanäle 1 straight coolant channel				

帶冷卻孔的圓棒, 研磨 h6, B96

Rods with one straight coolant channel, ground h6, B96

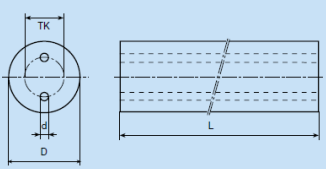
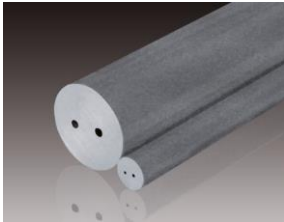
		Bestellbezeichnung Ordering code	D [mm]	L [mm]	d [mm]	HB20F
DMG1 	DMG1 6h6/1,0 x 330	6,00	330	1,00	6403442	
	DMG1 8h6/1,3 x 330	8,00	330	1,30	6403444	
	DMG1 10h6/2,0 x 330	10,00	330	2,00	6403430	
	DMG1 12h6/2,0 x 330	12,00	330	2,00	6403432	
	DMG1 14h6/2,0 x 330	14,00	330	2,00	6403434*	
	DMG1 16h6/2,0 x 330	16,00	330	2,00	6403436*	
	DMG1 18h6/3,0 x 330	18,00	330	3,00	6403438*	
	DMG1 20h6/3,0 x 330	20,00	330	3,00	6403440*	
Erklärung legend		DM = Durchmesser diameter / G1 = 1 gerader Kühlkanäle 1 straight coolant channel				

Stäbe ab Lager verfügbar Rods available from stock
 * Lieferzeit auf Anfrage Delivery time on request

帶兩個冷卻孔的圓棒, 燒結, B96

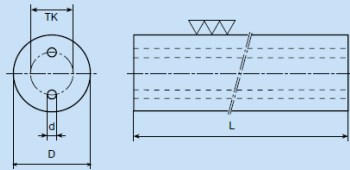

Rods with two straight coolant channels, as sintered, B96

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		Bestellbezeichnung Ordering code	D [mm]	L [mm]	TK [mm]	d [mm]	HB20F
DMG2 	DMG2 6,2/2,0/1,0 x 330	6,20	330	2,00	1,00	6403483*	
	DMG2 6,2/3,0/1,0 x 330	6,20	330	3,00	1,00	6403484*	
	DMG2 8,2/2,0/1,0 x 330	8,20	330	2,00	1,00	6403487*	
	DMG2 8,2/4,0/1,0 x 330	8,20	330	4,00	1,00	6403488	
	DMG2 10,2/2,6/1,2 x 330	10,20	330	2,60	1,20	6403449	
	DMG2 10,2/5,0/1,2 x 330	10,20	330	5,00	1,20	6403450*	
	DMG2 10,2/5,6/1,2 x 330	10,20	330	5,60	1,20	6403451*	
	DMG2 12,2/3,5/1,5 x 330	12,20	330	3,50	1,50	6403455*	
	DMG2 12,2/6,2/1,5 x 330	12,20	330	6,20	1,50	6403456	
	DMG2 14,2/5,0/2,0 x 330	14,20	330	5,00	2,00	6403460	
	DMG2 14,2/7,0/2,0 x 330	14,20	330	7,00	2,00	6403461	
	DMG2 16,2/5,0/2,0 x 330	16,20	330	5,00	2,00	6403465	
	DMG2 16,2/8,0/2,0 x 330	16,20	330	8,00	2,00	6403466	
	DMG2 18,2/6,2/2,0 x 330	18,20	330	6,20	2,00	6403469	
	DMG2 18,2/9,0/2,0 x 330	18,20	330	9,00	2,00	6403470*	
	DMG2 20,2/6,2/2,0 x 330	20,20	330	6,20	2,00	6403474	
DMG2 20,2/10,0/2,5x330	20,20	330	10,00	2,50	6403473		
DMG2 22,2/11,0/2,5x330	22,20	330	11,00	2,50	6403476*		
Erklärung legend	DM = Durchmesser diameter / G2 = 2 gerade Kühlkanäle 2 straight coolant channels						

帶兩個冷卻孔的圓棒, 研磨 h6, B96

Rods with two straight coolant channels, ground h6, B96

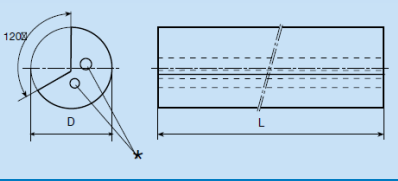
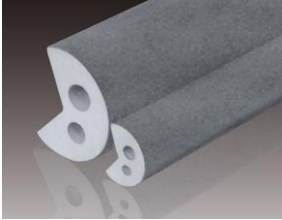
		Bestellbezeichnung Ordering code	D [mm]	L [mm]	TK [mm]	d [mm]	HB20F
DMG2 	DMG2 6h6/2,0/1,0 x 330	6,00	330	2,00	1,00	6403481*	
	DMG2 6h6/3,0/1,0 x 330	6,00	330	3,00	1,00	6403482*	
	DMG2 8h6/2,0/1,0 x 330	8,00	330	2,00	1,00	6403485	
	DMG2 8h6/4,0/1,0 x 330	8,00	330	4,00	1,00	6403486*	
	DMG2 10h6/2,6/1,2x330	10,00	330	2,60	1,20	6403446	
	DMG2 10h6/5,0/1,2x330	10,00	330	5,00	1,20	6403447*	
	DMG2 10h6/5,6/1,2x330	10,00	330	5,60	1,20	6403448*	
	DMG2 12h6/3,5/1,5x330	12,00	330	3,50	1,50	6403452*	
	DMG2 12h6/6,2/1,5x330	12,00	330	6,20	1,50	6403453	
	DMG2 14h6/5,0/2,0x330	14,00	330	5,00	2,00	6403457	
	DMG2 14h6/7,0/2,0x330	14,00	330	7,00	2,00	6403458	
	DMG2 16h6/5,0/2,0x330	16,00	330	5,00	2,00	6403463	
	DMG2 16h6/8,0/2,0x330	16,00	330	8,00	2,00	6403464	
	DMG2 18h6/6,2/2,0x330	18,00	330	6,20	2,00	6403467	
	DMG2 18h6/9,0/2,0x330	18,00	330	9,00	2,00	6403468*	
	DMG2 20h6/6,2/2,0x330	20,00	330	6,20	2,00	6403472	
	DMG2 20h6/10,0/2,5x330	20,00	330	10,00	2,50	6403471	
	DMG2 22h6/11,0/2,5x330	22,00	330	11,00	2,50	6403475*	
Erklärung legend	DM = Durchmesser diameter / G2 = 2 gerade Kühlkanäle 2 straight coolant channels						

Stäbe ab Lager verfügbar Rods available from stock
* Lieferzeit auf Anfrage Delivery time on request

帶兩個冷卻孔的圓棒, 槍鑽用, 燒結, B96

Rods with two straight coolant channels, for gun drills, as sintered, B96

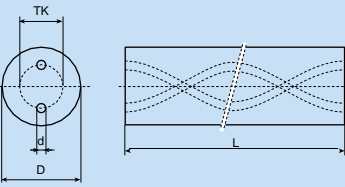



	Bestellbezeichnung Ordering code	D [mm]	L [mm]	Für Bohrer For drills		HB10
				D _{min} [mm]	D _{min} [mm]	
GD 	DM 8,85GD x 310	8,85	310	7,75	8,55	6410789
	DM 9,70GD x 310	9,70	310	8,56	9,40	6410790
	DM 10,60GD x 310	10,60	310	9,41	10,30	6410740
	DM 11,55GD x 310	11,55	310	10,31	11,25	6410741
	DM 12,55GD x 310	12,55	310	11,26	12,04	6410745
	DM 13,50GD x 310	13,50	310	12,05	12,90	6410746
	DM 14,50GD x 310	14,50	310	12,91	13,90	6410749
	DM 15,50GD x 310	15,50	310	13,91	14,90	6410750
	DM 16,50GD x 310	16,50	310	14,91	15,90	6410753
	DM 17,50GD x 310	17,50	310	15,91	16,90	6410754
	DM 18,60GD x 310	18,60	310	16,91	17,90	6410757
	DM 19,60GD x 310	19,60	310	17,91	18,90	6410758
Erklärung legend		DM = Durchmesser diameter / GD = Tieflochbohrer gun drill				
* nähere Informationen auf Anfrage further information on request						

帶兩個冷卻孔的圓棒, 30°, 燒結, B95

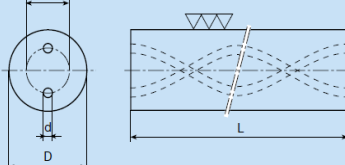
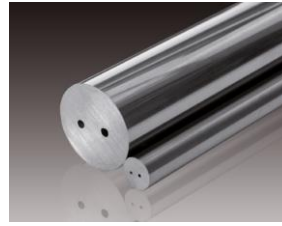
Rods with two drilled coolant channels, 30°, as sintered, B95

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	Bestellbezeichnung Ordering code	D [mm]	L [mm]	TK/BC [mm]	d [mm]	Steigung Pitch 30° +/- 0,5° [mm]	HB30F
	DM 6,3 KK230x330	6,30	330,00	2,60	0,70	32,65	6403795*
	DM 8,3 KK230x330	8,30	330,00	4,00	1,00	43,53	6403838*
	DM 10,3 KK230x330	10,30	330,00	4,80	1,40	54,41	6403516*
	DM 12,3 KK230x330	12,30	330,00	6,25	1,40	65,30	6403552*
	DM 14,3 KK230x330	14,30	330,00	7,10	1,75	76,18	6403582*
	DM 16,3 KK230x330	16,30	330,00	8,30	1,75	87,06	6403608*
	DM 18,3 KK230x330	18,30	330,00	9,55	2,00	97,95	6403625*
	DM 20,3 KK230x330	20,30	330,00	10,40	2,00	108,83	6403651*

帶兩個冷卻孔的圓棒, 30°, 研磨 h6, B95

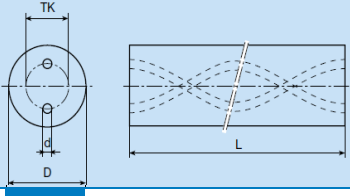
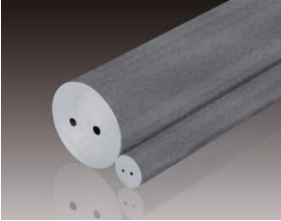
Rods with two drilled coolant channels, 30°, ground h6, B95

	Bestellbezeichnung Ordering code	D [mm]	L [mm]	TK/BC [mm]	d [mm]	Steigung Pitch 30° +/- 0,5° [mm]	HB30F
	DM 6h6 KK230x330	6,00	330,00	2,60	0,70	32,65	6403776*
	DM 8h6 KK230x330	8,00	330,00	4,00	1,00	43,53	6403820*
	DM 10h6 KK230x330	10,00	330,00	4,80	1,40	54,41	6403498*
	DM 12h6 KK230x330	12,00	330,00	6,25	1,40	65,30	6403537*
	DM 14h6 KK230x330	14,00	330,00	7,10	1,75	76,18	6403567*
	DM 16h6 KK230x330	16,00	330,00	8,30	1,75	87,06	6403592*
	DM 18h6 KK230x330	18,00	330,00	9,55	2,00	97,95	6403615*
	DM 20h6 KK230x330	20,00	330,00	10,40	2,00	108,83	6403634*

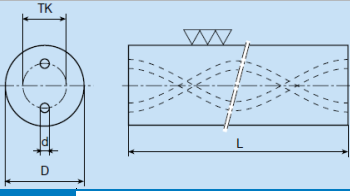

Stäbe ab Lager verfügbar Rods available from stock
 * Lieferzeit auf Anfrage Delivery time on request

帶兩個冷卻孔的圓棒, 40° , 燒結, B95
Rods with two drilled coolant channels, 40°, as sintered, B95



	Bestellbezeichnung	D	L	TK/BC	d	Steigung	HB30F
	Ordering code	[mm]	[mm]	[mm]	[mm]	Pitch 40° +/- 0,5° [mm]	
	DM 6,3 KK240x330	6,30	330,00	2,20	0,50	22,46	6411689*
	DM 8,3 KK240x330	8,30	330,00	2,70	0,65	29,95	6411691*
	DM 10,3 KK240x330	10,30	330,00	3,50	0,80	37,44	6411677*
	DM 12,3 KK240x330	12,30	330,00	4,20	0,90	44,93	6411679*
	DM 14,3 KK240x330	14,30	330,00	4,70	1,00	52,42	6411681*
	DM 16,3 KK240x330	16,30	330,00	5,50	1,20	59,90	6411683*
	DM 18,3 KK240x330	18,30	330,00	6,30	1,40	67,39	6411685*
	DM 20,3 KK240x330	20,30	330,00	7,10	1,50	74,88	6411687*

帶兩個冷卻孔的圓棒, 40° , 研磨 h6, B95
Rods with two drilled coolant channels, 40°, ground h6, B95

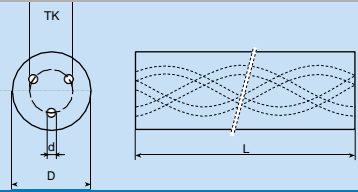
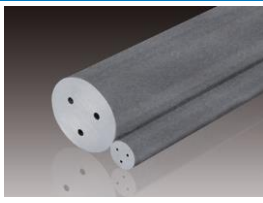
	Bestellbezeichnung	D	L	TK/BC	d	Steigung	HB30F
	Ordering code	[mm]	[mm]	[mm]	[mm]	Pitch 40° +/- 0,5° [mm]	
	DM 6h6 KK240x330	6,00	330,00	2,20	0,50	22,46	6411736*
	DM 8h6 KK240x330	8,00	330,00	2,70	0,65	29,95	6411738*
	DM 10h6 KK240x330	10,00	330,00	3,50	0,80	37,44	6411724*
	DM 12h6 KK240x330	12,00	330,00	4,20	0,90	44,93	6411726*
	DM 14h6 KK240x330	14,00	330,00	4,70	1,00	52,42	6411728*
	DM 16h6 KK240x330	16,00	330,00	5,50	1,20	59,90	6411730*
	DM 18h6 KK240x330	18,00	330,00	6,30	1,40	67,39	6411732*
	DM 20h6 KK240x330	20,00	330,00	7,10	1,50	74,88	6411734*

Stäbe ab Lager verfügbar Rods available from stock
* Lieferzeit auf Anfrage Delivery time on request

帶三個冷卻孔的圓棒, 30°, 燒結, B95

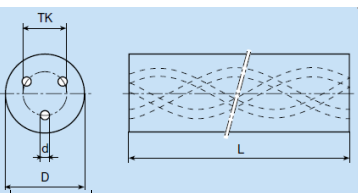
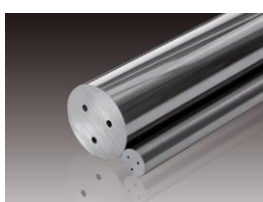
Rods with three drilled coolant channels, 30°, as sintered, B95

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	Bestellbezeichnung Ordering code	D [mm]	L [mm]	TK/BC [mm]	d [mm]	Steigung Pitch 30° +/- 0,5° [mm]	HB30F
	DM 10,3 KK330x330	10,30	330,00	5,10	0,85	54,41	6403517*
	DM 12,3 KK330x330	12,30	330,00	6,30	1,10	65,30	6403553*
	DM 14,3 KK330x330	14,30	330,00	7,30	1,40	76,18	6403583*
	DM 16,3 KK330x330	16,30	330,00	8,30	1,60	87,06	6403609*
	DM 18,3 KK330x330	18,30	330,00	9,50	1,70	97,95	6403626*
	DM 20,3 KK330x330	20,30	330,00	10,20	1,90	108,83	6403652*

帶三個冷卻孔的圓棒, 30°, 研磨 h6, B95

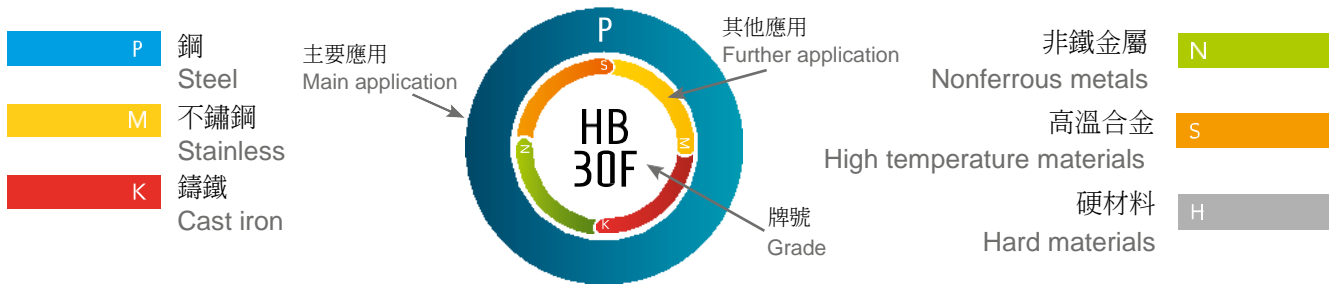
Rods with three drilled coolant channels, 30°, ground h6, B95

	Bestellbezeichnung Ordering code	D [mm]	L [mm]	TK/BC [mm]	d [mm]	Steigung Pitch 30° +/- 0,5° [mm]	HB30F
	DM 10h6 KK330x330	10,00	330,00	5,10	0,85	54,41	6403499*
	DM 12h6 KK330x330	12,00	330,00	6,30	1,10	65,30	6403538*
	DM 14h6 KK330x330	14,00	330,00	7,30	1,40	76,18	6403568*
	DM 16h6 KK330x330	16,00	330,00	8,30	1,60	87,06	6403593*
	DM 18h6 KK330x330	18,00	330,00	9,50	1,70	97,95	6403616*
	DM 20h6 KK330x330	20,00	330,00	10,20	1,90	108,83	6403635*

Stäbe ab Lager verfügbar Rods available from stock
* Lieferzeit auf Anfrage Delivery time on request

Description of the colour code and the Boehlerit ISO-K rod grades

材料組 Group of materials



亞微米級牌號 Submicrongrain grades

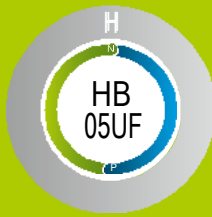
XS10
Submicrongrain carbide for rotary solid carbide tools. For machining of non-ferrous metals, aluminium alloys, fibre-reinforced plastics, graphite, cast materials of low and medium hardness, chilled casting, hardened steel. Optimized for diamond coating.
用於整體鎢鋼旋轉刀具的亞微米級鎢鋼。用於加工非鐵金屬、鋁合金、纖維強化塑膠、石墨、中低硬度鑄造材料、冷硬鑄造、淬火鋼。並對後段鑽石塗層進行最佳化。

HB10F
Submicrongrain carbide for rotary solid carbide tools. For machining of non-ferrous metals, aluminium alloys, fibre-reinforced plastics, graphite, cast materials of low and medium hardness, chilled casting, hardened steel.
用於整體鎢鋼旋轉刀具的亞微米級鎢鋼。用於加工非鐵金屬、鋁合金、纖維增強塑膠、石墨、中低硬度鑄造材料、冷硬鑄造、淬火鋼。

HB20F
Submicrongrain carbide for rotary solid carbide tools. For machining of grey cast iron, white malleable cast iron, unalloyed steel, super alloys, titanium und titanium alloys, non-ferrous metals, high-temperature resistant steel, plastics.
用於整體鎢鋼旋轉刀具的亞微米級鎢鋼。用於加工灰鑄鐵、可鍛白鑄鐵、非合金鋼、耐熱合金、鈦合金、非鐵金屬、耐高溫鋼、塑膠。

HB30F
Submicrongrain carbide for rotary solid carbide tools. For machining of stainless steel, acid and heat resistant steel, chromium-nickel-cobalt alloy steels, titanium alloys, plastics.
用於整體鎢鋼旋轉刀具的亞微米級鎢鋼。用於加工不鏽鋼，耐酸耐熱鋼、鉻鎳鈷合金鋼、鈦合金、塑膠。

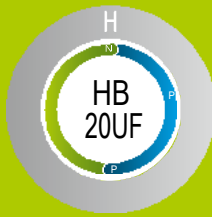
超細粒品種 Ultrafine grade



HB05UF

Ultrafine grade for HSC machining (finishing) from 62HRC and higher, as well as for machining of composites.

用於 HSC 高速加工（精加工）62HRC 及更高的超細材質等級，以及用於複合材料的加工。



HB20UF

Ultrafine grade for HSC machining (finishing) from 60HRC and higher, as well as for machining of composites

用於 60HRC 及更高 HSC 高速加工（精加工）以及複合材料加工的超細材質。



HB44UF

Ultrafine carbide with ideal combination of wear resistance and toughness. Especially suitable for rotating tools in the field of HSC-technology and for machining hardened steels having up to 62 HRC.

具有耐磨性和韌性理想組合的超細鎢鋼。特別適用於 HSC 技術領域和用於加工硬度高達 62 HRC 的淬火鋼的旋轉刀具。

Spezialsorte für Titan Roughing Special grade for titanium roughing



HB40T

Fine-/medium grain grade with ideal combination of toughness and wear resistance for the roughing of titanium materials.

具有韌性和耐磨性理想組合的細/中晶粒等級，適用於鈦材料的粗加工。

Boehlerit 特殊產品
Boehlerit special products

Boehlerit is the market leader for special tools used for the toothing of differential gears and for hob blanks in the production of gear-wheels. Boehlerit produces special precast drilling and milling blanks in a fast manufacturing process requiring only a few days time.

Boehlerit是差動齒輪刀具和滾齒刀毛坯的領導者。快速製造過程中，Boehlerit生產特殊的預鑽和預銑的毛坯，因此生產僅需幾天時間。





XS10 – The new 6 % cobalt grade from the carbide and tool specialist Boehlerit. Optimized for diamond coating!

xs10 – 全新的6%鈷鎢鋼材質是Boehlerit刀具專家的新作。這款全新材質優化了鑽石塗層刀具的穩定性！

Areas of application 適用範圍:

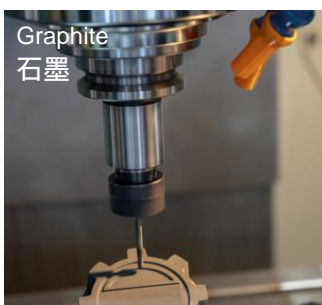
- Graphite machining - Mold making graphite electrodes - 石墨加工 - 模具製造業石墨電極
- Electronics industry - Machining of printed circuit boards - 電子業及積體電路板加工
- Machining of composite materials - 複合材料加工
- Aerospace industry - 航太材料

Available from stock in Ø 4, 5, 6, 8, 10, 12 mm, sintered rough and h6 grounded (from 06/2021)!

Ø 4、5、6、8、10、12 mm 毛坯和h6精磨棒料

Tested and approved by: CemeCon, Oerlikon Balzers, Weber Technologies

用戶測試認證: CemeCon、Oerlikon Balzers、Weber Technologies



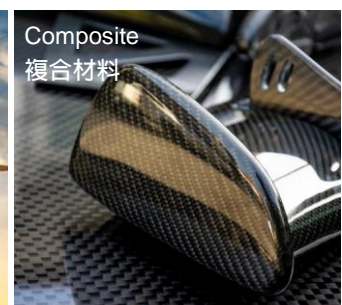
Graphite
石墨



PCB
積體電路板



Aviation
航太



Composite
複合材料

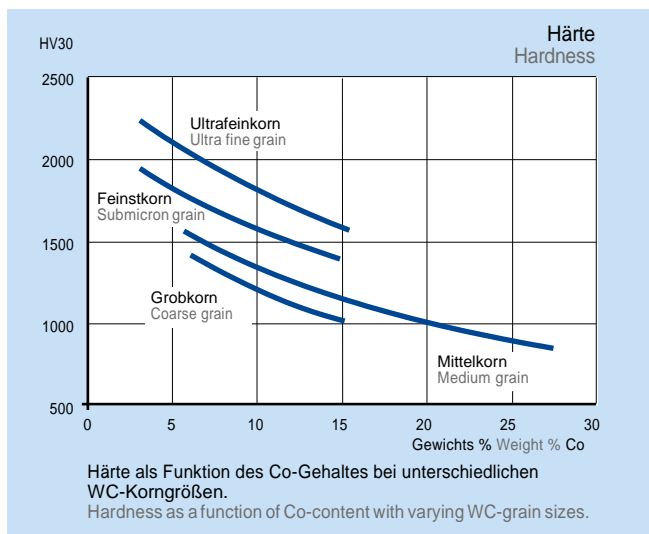
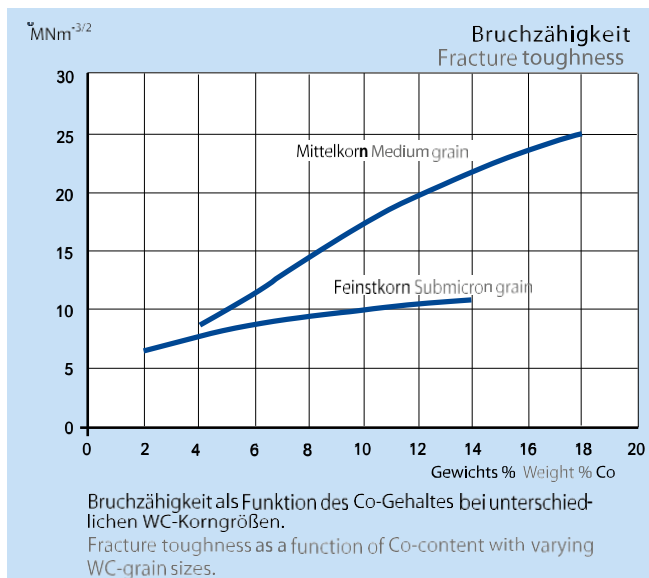
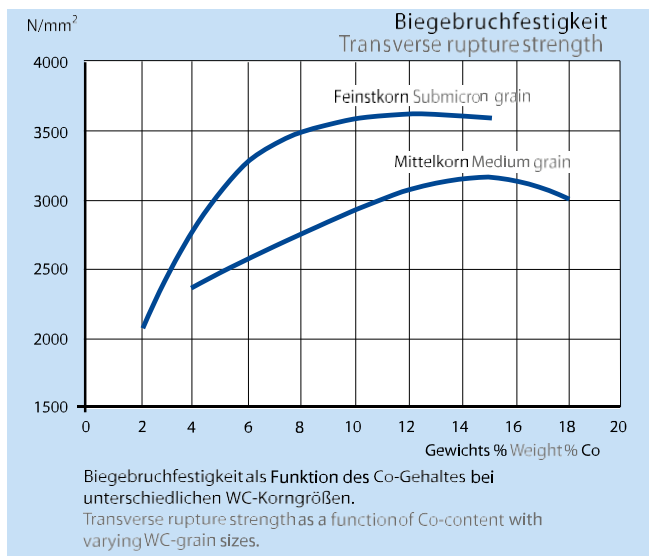
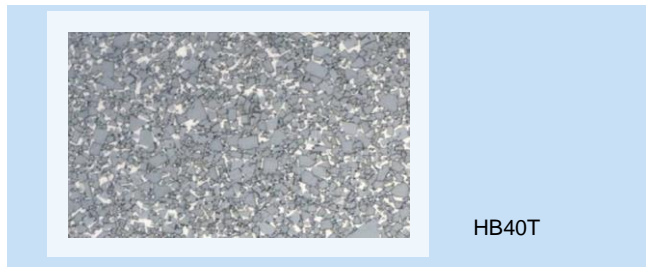
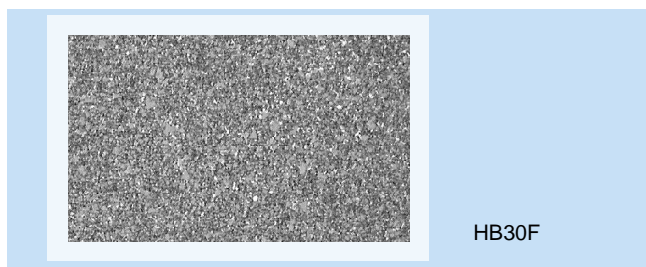
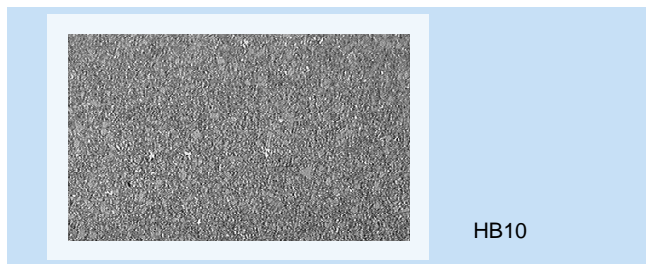
鎢鋼牌號：應用、化學成分、物理特性

Carbide grades: Application, chemical composition, physical properties

Anwendung Application	Sorte Grade	ISO- Anwendung ISO- application area ISO 513	Chemische Zusammensetzung Gewichtsprozent Chemical composition percentage of weight			Dichte Density ISO 3369 g/cm ³	Härte HV 30 Hardness HV 30	Druck- festigkeit Com- pressive strength ISO 4506 N/mm ²	Biegebruch- festigkeit Transverse rupture strength ISO 3327 N/mm ²	Bruch- zähigkeit Fracture toughness K _{IC} MNm ^{-3/2}	E-Modul Young's modulus ISO 3312 kN/mm ²	Wärme- dehnungs- koeffizient Thermal expansion coefficient 10 ⁻⁶ /K
			WC	Others	Co							
超細粒品種 Ultrafine grades	HB05UF	K05	96,0		4,0	15,05	2100	6500	3200	8,1	650	5
	HB10UF	K05-K15	93,5		6,5	14,75	2025	6100	3400	8,3	640	5,0
	HB20UF	K10-K20	92,0		8,0	14,60	1975	6000	3500	8,7	600	5,0
	HB30UF	K15-K30	90,0		10,0	14,35	1900	5700	3600	9,0	585	5,5
	HB44UF	K20-K40	88,0		12,0	14,20	1675	5200	3500	10,2	550	5,5
亞微米級 Submicrongrain grades	HB01F	K01-K05	93,0	2,0	5,0	14,75	2075	6200	2500	8,2	640	5,0
	HB03F	K01	97,0		3,0	15,20	2025	6800	2100	7,5	670	5,0
	HB03FNi	K01	97,0	0,5 Ni	2,5	15,20	1950	6400	2400	8,0	665	5,0
	HB10F	K05-K15	94,0		6,0	14,85	1825	6000	3400	9,2	630	5,0
	XS10	K05-K15	94,0		6,0	14,85	1825	6000	3400	9,1	630	5,0
	HB20F	K10-K20	92,5		7,5	14,70	1750	5900	3500	9,5	600	5,0
	HB30F	K15-K30	90,0		10,0	14,40	1650	5600	3600	10,4	580	5,5
	HB40F	K20-K40	88,0		12,0	14,20	1525	5200	3600	10,9	550	5,5
HB50F	K30-K45	85,0		15,0	13,90	1475	5100	3600	11,3	545	6,0	
車削, 銑削, 鑽孔, 鉸孔 磨損保護 Turning, milling, drilling, reaming, wear protection	HB01	K01	95,5		4,5	15,00	1850	6100	1700	7,9	650	5,0
	HB10	K10	94,0		6,0	14,95	1700	5700	2400	9,0	620	5,0
	HB20	K20	Rest	<0,20	6,5	14,90	1500	5500	2600	9,6	630	5,0
	HB30	K30	Rest	<0,20	10,0	14,50	1350	5200	2700	13,7	600	5,5
	HB40	K40	Rest	<0,20	12,0	14,30	1275	4800	3000	15,5	585	5,5
	HB40T	K40	Rest	<0,20	12,0	14,30	1280	4900	3000	15,4	585	5,5
HB50	K50	Rest	<0,20	15,0	14,00	1100	4400	3000	21,0	550	6,0	
磨損保護, 成型, 切削, 熱處理 Wear protection, forming, cutting, hot work	GB02	K05	Rest		4,0	15,15	1750	5700	2800	8,7	620	5,0
	GB10	K20	Rest	<0,20	6,5	14,90	1550	5500	2600	9,6	630	5,0
	GB15	K30	Rest	<0,20	10,0	14,50	1350	5200	2700	13,7	600	5,5
	GB20	K40	Rest	<0,20	12,0	14,30	1275	4800	3000	15,5	585	5,5
	GB30	K50	Rest	<0,20	15,0	14,00	1100	4400	3000	21,0	550	6,0
	GB32		Rest	<0,20	20,0	13,55	1025	4200	2800	≥24,0	530	6,0
	GB33		Rest	1,25	20,0	13,40	1050	4200	2800	≥24,0	530	6,0
	GB35		Rest	<0,20	15,0	14,00	1025	4400	3000	22,0	550	6,0
	GB35HB		85,0		15,0	14,0	975	4300	3000	23,0	550	6,0
	GB40		Rest	<0,20	19,0	13,60	950	4000	2800	≥24,0	530	6,0
GB52		Rest	<0,20	26,0	13,05	890	3300	2700	≥24,0	490	6,5	
GB56		Rest	<0,20	26,0	13,05	815	3200	2700	≥24,0	490	6,5	
特殊牌號 Special grades	MB05	K05	94,12			14,95	1950	6000	2500	8,4	640	5,0
	MB10EDM	K30-K40	89,0			14,40	1600	5500	3600	10,7	580	5,5
	MB20EDM	K40	87,0			14,15	1350	4900	2900	13,8	585	5,5
	MB30EDM	K50	83,6			13,8	1250	4700	2900	18,4	565	5,7
	MB40EDM		78,75			13,4	1050	4200	2800	≥24,0	530	6,0
抗腐蝕 Corrosion resistant grade	GB10Ni		94,0		6,0 Ni	15,00	1500	4900	2300	8,4	600	5,4
	GB25Ni		90,0		10,0 Ni	14,50	1350	4600	2500	10,5	580	5,4
採礦, 隧道建設 土木工程, 石材加工 Mining, tunnelling, foundation work, stone dressing	BB01		Rest	<0,20	6,0	14,95	1475	5600	2600	10,8	620	5,0
	BB10		Rest	<0,20	8,0	14,75	1275	5200	2500	14,5	600	5,0
	BB40		Rest	<0,20	13,0	14,20	1100	4500	2600	≥21,0	570	5,5
車削, 銑削 Turning, milling	SBF mod	P20-P40	72,7	17,3	10,0	12,30	1525	5100	2300	9,8	550	6,0
	SB30	P25-P30	69,0	21,0	10,0	11,40	1500	5100	2200	10,0	520	6,0
	SB40	P35-P45	77,0	12,0	11,0	12,90	1375	5000	2400	12,0	540	6,0
車削, 銑削 Turning, milling	EB10	M10-M15	83,5	10,0	6,5	13,05	1600	5700	2200	9,5	590	5,5
	EB15	M15-M20	81,8	10,7	7,5	13,10	1575	5600	2200	10,5	580	5,5
	EB40	M35-M45	82,8	5,0	12,2	13,60	1350	5000	2600	12,4	550	6,0

結構和性質

Microstructure and characteristics



Boehlerit GmbH & Co. KG
Werk VI-Strasse 100
8605 Kapfenberg
Österreich/Austria
Telefon +43 3862 300 - 0
Telefax +43 3862 300 - 793
info@boehlerit.com
www.boehlerit.com

boehlerit



台北 02-2703-0193
台中 04-2463-6890



www.gcarbide tool.com