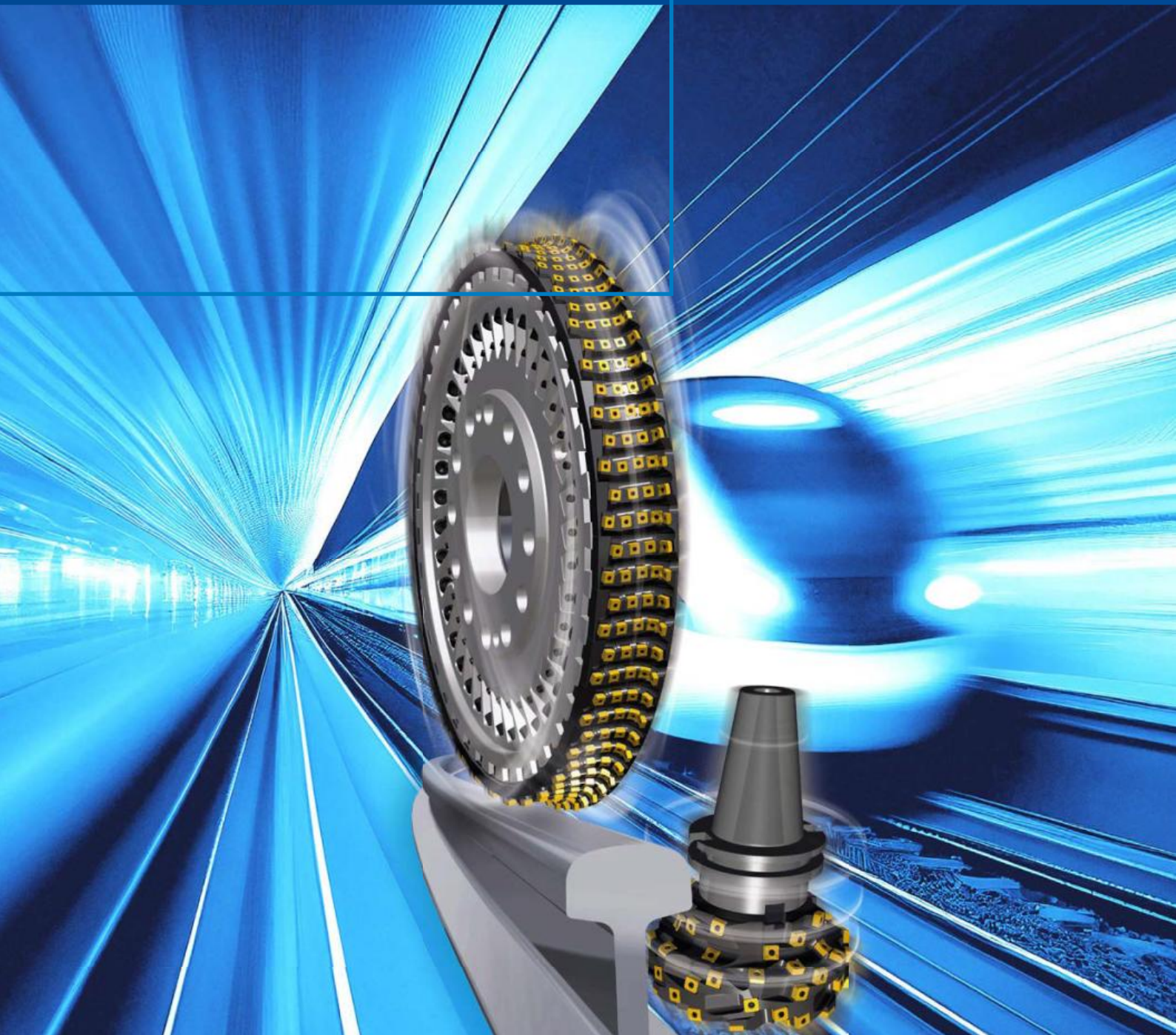


boehlerit

铁道钢轨和道岔加工
Rail- and turnout
machining



Boehlerit – 硬质合金开发先驱

Boehlerit是一家家族企业，隶属于Brucklacher集团（Leitz、Bilz和Boehlerit），总部位于奥地利小镇卡芬贝格，为金属、木材、塑胶和复合材料加工的硬质合金和刀具制定了全球标准。

凭借用于铣削、车削、钻孔和成型的切削材料、半成品、精密刀具和刀具系统，Boehlerit确保了全球范围内的工艺安全和效率。该公司广泛的产品组合包括用于曲轴加工以及采矿业、棒材剥皮、管材和板材加工以及重型加工的高度专业化工具。Boehlerit产品系列还具有用于建筑部件和磨损保护的碳化物。

在涂层技术方面，Boehlerit在全球范围内占据着独特的地位，从有史以来第一个纳米CVD黏合层到全球最硬的钻石层。凭借在冶金、涂层技术和最先进的冲压技术方面的多年经验，Boehlerit成为刀具制造商的高素质开发合作伙伴。

Boehlerit – Pioneer in carbide development www.boehlerit.com

Boehlerit, a family business that is part of the Brucklacher group (Leitz, Bilz and Boehlerit) and headquartered in the Austrian town of Kapfenberg, sets global standards with carbides and tools for the processing of metal, wood, plastics and composites. With cutting materials, semi-finished products, precision tools and tool systems for milling, turning, drilling and forming, Boehlerit ensures process safety and efficiency on a global scale. The company's extensive product portfolio includes highly specialised tools for the machining of crankshafts as well as for the mining industry, for bar peeling, tube and sheet metal processing and heavy-duty machining. The Boehlerit product range also features carbides for construction components and wear protection. When it comes to coating technology, Boehlerit occupies a unique position worldwide, ranging from the first-ever nano-CVD bonding layer to the hardest diamond layer worldwide. With its many years' experience in metallurgy, coating technology and state-of-the-art press technology, Boehlerit is a highly competent development partner for toolmakers.



hard facts for best results

生产基地

Boehlerit集团制定了国际品质标准。每年，公司都会投资新的生产技术并扩大其先进生产基地的产能。奥地利、德国和土耳其制造的高品质产品融合了最新的研发成果。

Production sites

The Boehlerit Group sets international quality standards. Every year, the company invests in new production technologies and in the expansion of capacities at its advanced production sites. High-quality products made in Austria, Germany and Turkey incorporate the latest research and development findings.



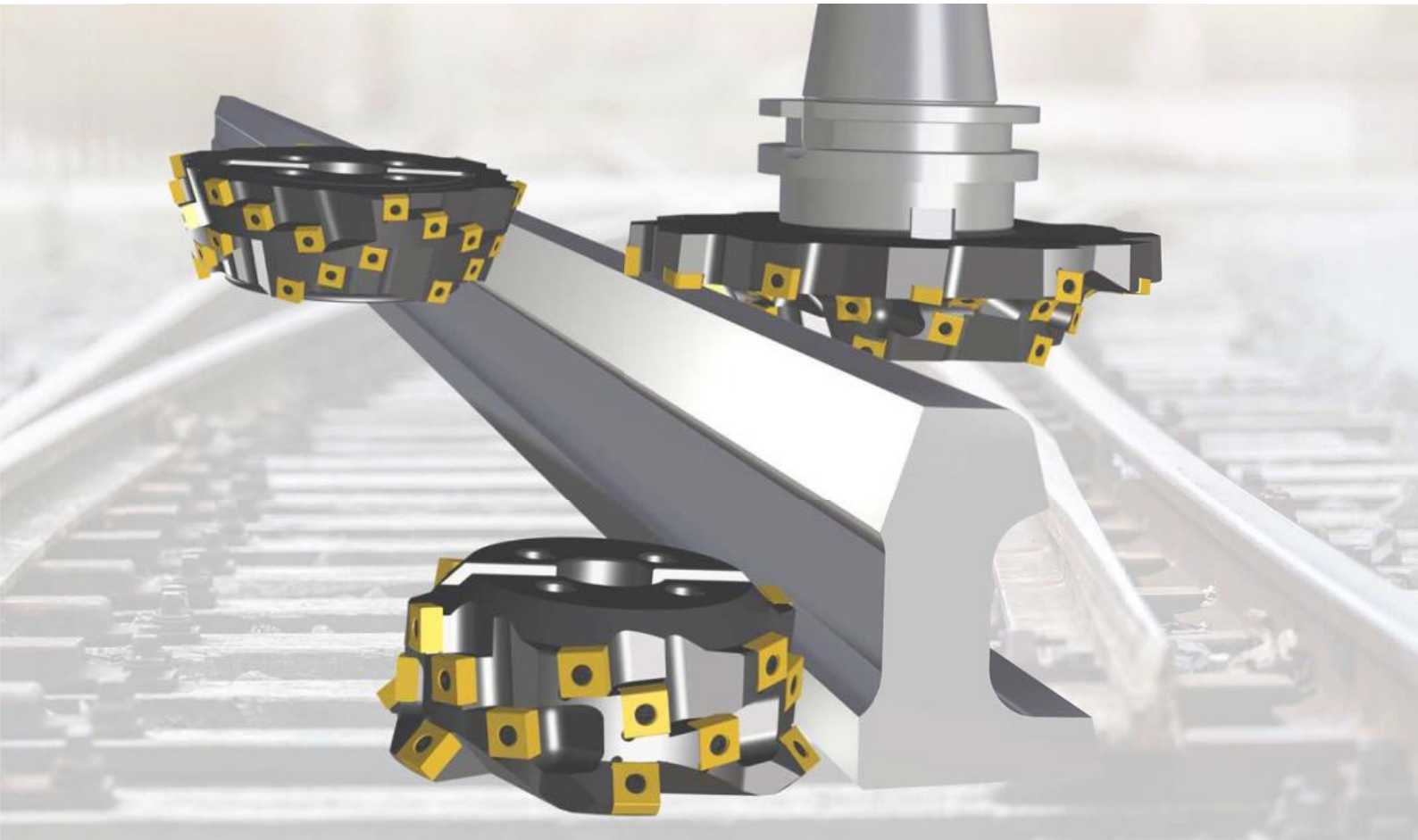
Boehlerit Kapfenberg (Headquarter)
in der Steiermark/Österreich Styria/Austria



Boehlerit Sert Metal
in Istanbul/Türkei Turkey



Boehlerit Deutschland
in Oberkochen Deutschland/Germany



对于每个处理步骤 正确的铣刀

道岔是铁轨上压力很大，昂贵的元素，设计复杂，生产要求高。精确、高效地制造的组件可确保最佳功能并延长工具寿命。

Boehlerit为您提供：

可靠的刀具和精确的切削以进行道岔加工量身定制的设计可满足您的需求。



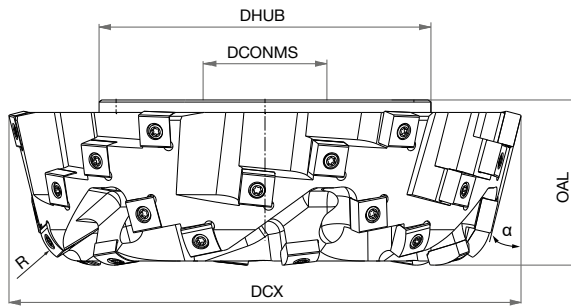
The right milling tool for every processing step

We know that turnouts are highly stressed, expensive elements of the railway track, complex in terms of design and demanding in terms of production. Precisely, efficiently manufactured components ensure optimal functionality and a long tool life.

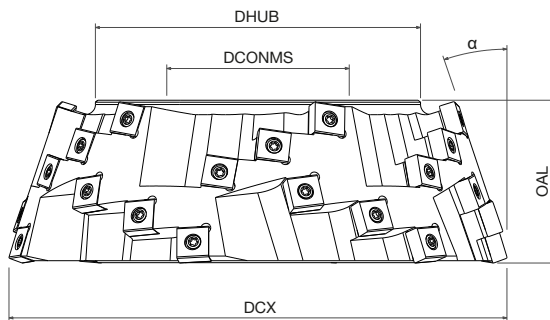
Boehlerit offers you:

Robust tools and precise cutting for turnout machining Tailor-made designs to fit your profile.

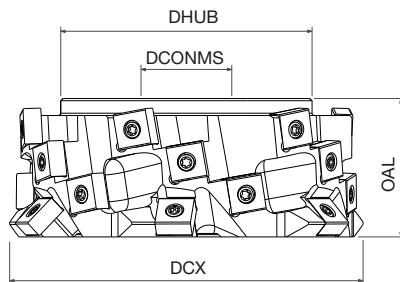




Artikelbezeichnung Item code	Bestell-Nr. Ordering No.	Verfügbarkeit Availability								Ersatzteil Spar parts
			Ø DCX	Ø DHUB	Ø DCONMS	OAL	α	R	ZEFF	
D-06-243/ R20 R	5132271	○	250	162	60	80	14°	20	36	Spannschraube Fixation screw A021-S0150 5132563
D-06-242/ R20 L	5193143	○	250	162	60	80	14°	20	36	



Artikelbezeichnung Item code	Bestell-Nr. Ordering No.	Verfügbarkeit Availability								Ersatzteil Spar parts
			Ø DCX	Ø DHUB	Ø DCONMS	OAL	α	R	ZEFF	
D-06-239/ 18,5°	5132273	○	250	162	60	80	18,5	-	36	Spannschraube Fixation screw A021-S0150 5132563



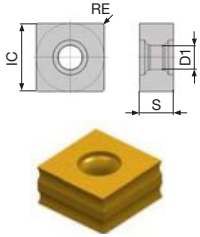
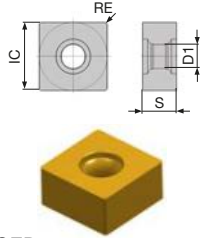
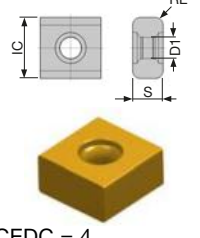
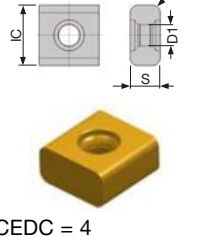
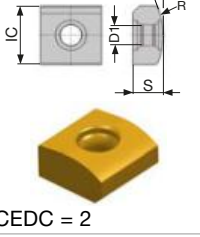
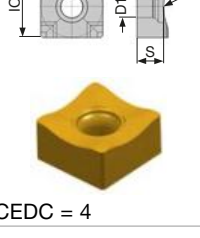
Artikelbezeichnung Item code	Bestell-Nr. Ordering No.	Verfügbarkeit Availability								Ersatzteil Spar parts
			Ø DCX	Ø DHUB	Ø DCONMS	OAL	α	R	ZEFF	
D-06-240/Z1153 L	5132272	○	164	112	40	60	-	-	24	Spannschraube Fixation screw A021-S0150 5132563

Bestellbeispiel Order example:

1 Stück Piece D-06-243/R20 R oder or 5132271

***)可根据要求定制设计! 我们很乐意为您提供建议!**

***)Customized designs on request! We will be happy to advise you!**

CEDC = Anzahl der Schneidkanten CEDC = Number of cutting edges	Artikelbezeichnung Item code	Schneidstoff- sorte Cutting materials	Bestell-Nr. Ordering No.	Verfügbarkeit Availability	Abmessungen [mm] Dimensions [mm]					
					IC	S	D1	RE	R	α
 CEDC = 8	SNNX 1507-FP	BCP40M	5136526	●	15,88	7,94	5,8	-	-	-
 CEDC = 8	SNNQ 1507	BCP35M	5127251	●	15,88	7,94	5,8	0,6	-	-
	SNNQ 1507	BCP40M	5127269	●	15,88	7,94	5,8	0,6	-	-
 CEDC = 4	SNNX 150706	BCP35M	5127275	○	15,88	7,94	5,8	0,6	-	-
	SNNX 150706	BCP40M	5127276	●	15,88	7,94	5,8	0,6	-	-
 CEDC = 4	SNNX 150720	BCP35M	5127278	○	15,88	7,94	5,8	2	-	-
	SNNX 150720	BCP40M	5127280	●	15,88	7,94	5,8	2	-	-
 CEDC = 2	SNNX 1507 - OR10	BCP35M	5127299	○	15,88	7,94	5,8	-	10	-
	SNNX 1507 - OR10	BCP40M	5127306	●	15,88	7,94	5,8	-	10	-
	SNNX 1507 - OR14	BCP35M	5127281	○	15,88	7,94	5,8	-	14	7°
	SNNX 1507 - OR14	BCP40M	5127290	●	15,88	7,94	5,8	-	14	7°
	SNNX 1507 - OR20	BCP35M	5127292	○	15,88	7,94	5,8	-	20	17°
	SNNX 1507 - OR20	BCP40M	5127294	●	15,88	7,94	5,8	-	20	17°
 CEDC = 4	SNNX 1507-IR13	BCP35M	5127315	○	15,88	7,94	5,8	-	13	-
	SNNX 1507-IR13	BCP40M	5127316	●	15,88	7,94	5,8	-	13	-

Bestellbeispiel Order example: 10 Stück piece SNNX 150720 oder or 5127278

● Verfügbar ab Lager Available from stock
○ Lieferzeit auf Anfrage Delivery time on request



完美保养的铁轨

完美保养的铁轨使乘坐拥有舒适性，也使刀具寿命长和操作安全性拥有高水平。借助我们专门设计的轨道铣削系统，赋予了磨损的轨道新生命，精确度和效率都很高。

Boehlerit为您提供履带铣削系统，可对磨损的钢轨进行完美的重型加工，并根据您的要求量身定制。

速度：0.2 – 3 mm，最高2500 m / h。

优点：

- 坚固耐用的设计
- 一体式或刀片式版本，可快速更换刀具
- 高度精确的设计可提供精确的铣削结果

Perfectly maintained rails

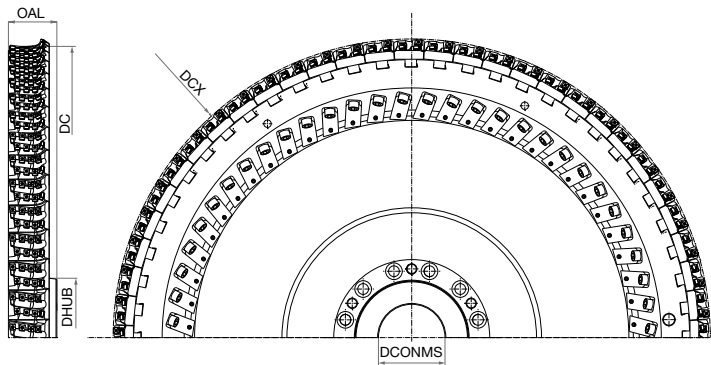
Perfectly maintained rails are a prerequisite for excellent riding comfort, a long tool life and a high level of operational safety. With our specially designed track-milling system, worn rails are given a new lease of life, with great precision and efficiency. Boehlerit offers you track-milling systems for the perfect re-profiling of worn rails, tailored to fit your exact requirements. Removal rate: 0.2 – 3 mm, up to 2500 m/h.

Benefits:

- Robust, durable design
- Monobloc or cartridge version for speedy tool changes
- Highly precise design for clean, exact milling results



Fräser für die Schienenbearbeitung
Milling Cutter for Railway machining



Artikelbezeichnung Item code	Bestell-Nr. Ordering No.	Verfügbarkeit Availability	Ø DC	Ø DCX	Ø DHUB	Ø DCONMS	OAL	ZEFF ^{*)}
D-75-140/Z-15745 Right	5066120	○	1400	1437	280	160	116	36
D-75-139/Z-15745 Left	5066114	○	1400	1437	280	160	116	36

Bestellbeispiel Order example: 1 Stück Piece BF45 HP12.125BT Z07 R oder or 5144138
Fräser einsatzfertig montiert - exklusive Wendschneidplatte
Milling cutter ready to use - exclusive Inserts

Ersatz-Kassette und Ersatzteile für Planfräskopf 45° HP12
Replacment-cartridge and spare parts for face milling cutter 45° HP12

	Kassette Rechts Cartridge D-72-473 5066123			
	Kassette Links Cartridge D-72-472 5066122	Unterlagsplatte Shim D-20-060 5062628	Gewindehülse Shim screw D-23-005 6413185	Spannschraube Fixation screw D-22-020 6413184

CEDC = Anzahl der Schneidkanten CEDC = Number of cutting edges	Artikelbezeichnung Item code	Schneid- stoffsorte Cutting materials	Bestell-Nr. Ordering No.	Verfügbarkeit Availability	Abmessungen [mm] Dimensions [mm]			
					IC	S	D1	RE
	SNNQ 1206	BCM35W	5200973	○	12,7	6,35	4,5	0,8
	SNNX 1306 IR13	BCM35W	5200978	○	13,5	5,35	4,5	0,8

^{*)} 可根据要求定制设计！我们很乐意为您提供建议！
^{*)} Customized designs on request! We will be happy to advise you!

● Verfügbar ab Lager Available from stock
○ Lieferzeit auf Anfrage Delivery time on request



一个刀盘多种选择 One basic body - many options

BULLtec® 2.0 Serie

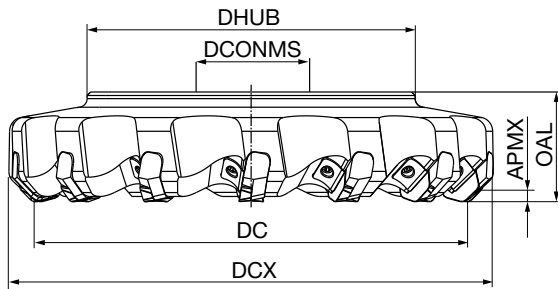
模块化BULLtec® 2.0刀具系统为重型加工的性能、成本效益和灵活性树立了新标准。其小型、经济的刀夹易于更换，可用于多种不同材料的表面铣削。单一 BULLtec® 2.0刀具系统由刀盘和用于可转位切削刀片的可更换刀架组成。不同的刀架类型可以与不同尺寸的刀盘灵活组合，与其他系统相比大大增加了灵活性。创新的固定设计确保刀盘本体、刀夹和可转位切削刀片稳定、精确地融合，无需进一步调整。

透过这种方式，BULLtec® 2.0 工具可以快速、轻松地适应特殊任务，或根据需要从头开始设定。此外，可转位刀片的可触及位置使得更换它们变得非常容易。由于采用专门设计的可转位刀片主偏角，所有BULLtec® 2.0刀具系统均以其特别柔软的切削而脱颖而出，从而保护刀具和机器并显著延长刀具寿命。

The modular BULLtec® 2.0 tooling system sets new standards for performance, cost-efficiency and flexibility in heavy-duty machining. Its small, economical cartridges are easy to replace and can be used for face milling of a wide range of different materials. A single BULLtec® 2.0 tooling system consists of a base body and exchangeable cartridges for the indexable cutting inserts. Different cartridge types may be combined flexibly with different-sized base bodies, greatly increasing flexibility in comparison with other systems. The innovative tool holders ensure the stable, precise fusion of the base body, the cartridges and the indexable cutting inserts, without the need for further adjustments. In this way, BULLtec® 2.0 tools may be adapted to special tasks quickly and effortlessly, or set up from scratch where required. In addition, the accessible position of the indexable inserts makes it astonishingly easy to exchange them. Thanks to the specially designed approach angle of the indexable inserts, all the BULLtec® 2.0 tooling systems stand out for their particularly soft cut, thereby protecting tools and machines and significantly increasing tool life.



Planfräskopf 45° / SP.. 20
Face milling cutter 45° / SP.. 20



Artikelbezeichnung Item code	Bestell-Nr. Ordering No.	Verfügbarkeit Availability	Abmessungen [mm] Dimensions [mm]						
			DC	DCX	DHUB	DCONMS	OAL	APMX	ZEFF
BF45 SP20.125BT Z07 R	5144152	○	125	147	120	40	63	10	7
BF45 SP20.160BT Z09 R	5144153	●	160	182	120	40	63	10	9
BF45 SP20.200BT Z11 R	5144154	●	200	222	159	60	63	10	11
BF45 SP20.250BT Z14 R	5144156	●	250	272	190	60	63	10	14
BF45 SP20.315BT Z18 R	5144157	●	315	337	274	60	63	10	18
BF45 SP20.400BT Z18 R	5144158	○	400	422	274	60	80	10	18
BF45 SP20.400BT Z22 R	5144159	○	400	422	274	60	80	10	22
BF45 SP20.500BT Z22 R	5144160	○	500	522	274	60	80	10	22
BF45 SP20.500BT Z26 R	5144162	○	500	522	274	60	80	10	26

Bestellbeispiel Order example: 1 Stück Piece 5144152 oder or BF45 SP20.125BT Z07 R
 Fräser einsatzfertig montiert - exklusive Wendeschneidplatte
 Milling cutter ready to use - exclusive Inserts

Hinweis: Linksausführung **L** auf Anfrage
 Note: Left hand version **L** on request

Ersatz-Kassette und Ersatzteile für Planfräskopf 45° SP20
Replacment-cartridge and spare parts for face milling cutter 45° SP20

	Kassette CBT45 SP20 R inkl. Spannschraube Cartridge CBT45 SP20 R incl. fixation screw 5136693		Spannschraube für Kassette Fixation screw for cartridge 5049762		Spannkeil Wedge clamp 5132639		Spannschraube für Spannkeil Fixation screw for wedgeclamp 5132480		Drehmoment-schlüssel Torque wrench 5136235
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Bestellbeispiel Order example: 1 Stück Piece Kassette Cartridge 5136693 oder or CBT45 SP20 R

N = Anzahl der Schneidkanten N = Number of cutting edges	Artikelbezeichnung Item code	Schneidstoffsorte Cutting materials	Bestell-Nr. Ordering No.	Verfügbarkeit Availability	Abmessungen [mm] Dimensions [mm]		
					L	IC	S
 CEDC = 4	SPKN 2006 ADSN	BCP20M	5173433	○	20	20	6,35
	SPKN 2006 ADSN	BCP25M	5190694	●	20	20	6,35
	SPKN 2006 ADSN	BCP30M	5190697	○	20	20	6,35
	SPKN 2006 ADSN	BCP35M	5137986	●	20	20	6,35
	SPKN 2006 ADSN	BCM40M	5137989	●	20	20	6,35
	SPKN 2006 ADSN	BCK15M	5190708	○	20	20	6,35
	SPKN 2006 ADSN	BCK20M	5176323	●	20	20	6,35

Bestellbeispiel Order example: 10 Stück piece 5173433 oder or SPKN 2006 ADSN BCP20M

Empfehlung: Mindestens Aufnahme SK-60 verwenden!
 Recommendation: Use at least chuck SK-60!

- Verfügbar ab Lager Available from stock
- kurzfristig lieferbar shortly available
- Auf Anfrage On request

Schneidstoffsorten/Cutting grades

Universelle Stahlfrässorte in Kombination mit Anstellwinkel 90°. Eine PVD Schicht und eine zähe Hartmetallsorte zum Fräsen von den gängigen Stahlsorten. Besonders gut geeignet zum Trockenfräsen bei niedrigen bis mittleren Schnittgeschwindigkeiten unter schwierigen Bedingungen.

Eine PVD Schicht und zähe Hartmetallsorte zum Schruppen von vor allem Werkzeug-, Vergütungs-, Einsatzstählen und austenitisch, rostfreien Materialien.

Verschleißfeste PVD-Beschichtung in Verbindung mit einer kantenstabilen Feinkornsorte zur Bearbeitung von rostfreien und teilverhärteten Materialien, zur Nass- und Trockenbearbeitung geeignet.

Extrem zähes, relativ feinkörniges Hartmetallsubstrat mit dünner, glatter PVD Beschichtung. Ideale Sorte zum Fräsen von austenisch rostfreien Stählen und Werkstoffen aus der Duplexgruppe mit niedrigen bis mittleren Schnittgeschwindigkeiten. Auch für die Nassbearbeitung, jedoch wird Minimalmengenschmierung empfohlen.

Universal steel milling grade in combination with 90° approach angle. A PVD layer and a tough carbide grade for milling of the most usual steel qualities. Especially good suitable for dry milling at low to medium cutting speeds under difficult conditions.

A PVD-layer plus tough carbide grade for roughing of mainly tool, heat-treated and case-hardened steel, as well as austenitic, stainless materials.

Wear-resistant PVD coating combined with a good edge stable fine-grain grade for machining stainless and partially hardened material, suitable for wet and dry machining.

Extremely tough, relative fine grained carbide substrate with thin, smooth PVD coating. Ideal grade for milling of austenitic stainless steels and materials from the Duplex group with low to medium cutting speeds. Also for wet machining, although minimum coolant supply is recommended.

● **BCK15M (HC-K15) TERAspeed 2.0**

Ausgesuchte Rohstoffe für ein optimiertes K15-Hartmetallsubstrat mit einer extrem harten und verschleißfesten HR-CVD Mehrlagen-Beschichtung. Ideal geeignet für die Trockenbearbeitung von Grauguss (GJL), Kugelgraphitguss (GJS), Temperguss und legiertem Guss.

● **BCK20M (HC-K20/P10)**

Zähes K20 Substrat und eine dicke PVD-Beschichtung für die Bearbeitung von Gussmaterialien.
Auch als Schlichtsorte für die Stahlzerspanung und für die Bearbeitung von Kaltarbeitsstählen härter als 54 HRC geeignet.

● **BCK15M (HC-K15) TERAspeed 2.0**

Selected raw materials for an optimised K15 carbide substrate with a particularly hard and wear-resistant HR-CVD multilayer coating. Ideal for dry machining of grey cast iron (GJL), spheroidal graphite cast iron (GJS), tempered cast iron and alloyed cast iron.

● **BCK20M (HC-K20/P10)**

Tough K20 substrate and a thick PVD coating for the machining of cast materials.
Also suited as finishing grade for steel cutting and the machining of cold work steels of 54 HRC.

Schnittwertempfehlung für Fräser 45°

Cutting data recommendations for Milling Cutter 45°

ISO 513	BZG		Kühlung Cooling			Schnittdaten v_c [m/min] Cutting data v_c [m/min]			
			MMS/Luft MMS/Air	Trocken Dry	Nass Wet	BCP35M BCP40M	BCM35W	BCM40M	BCK15M BCK20M
P	P1		●	●		180 - 260	---	200 - 260	220 - 280
	P2		●	●		160 - 200	---	160 - 220	190 - 240
	P3		●	●		120 - 160	---	130 - 170	150 - 190
	P4		●	●		110 - 150	---	120 - 150	---
	P5		●	●		120 - 170	---	130 - 190	140 - 200
M	M1		●	●	●	---	120 - 200	110 - 160	---
	M2		●	●	●	---	80 - 130	70 - 120	---
K	K1		●	●		---	---	---	220 - 360
	K2		●	●		---	---	---	150 - 190
	K3		●	●		---	---	---	170 - 240
S	S1		●	●	●	---	70 - 90	55 - 70	---
	S2		●	●	●	---	35 - 45	25 - 35	---
	S3		●	●	●	---	50 - 100	30 - 70	---
	S4		●	●	●	---	30 - 80	25 - 50	---

Schnittwertempfehlung für BULLtec®

Bei Verwendung des Systems BULLtec® 2.0 ist eine Reduktion der Schnittdaten von 30 - 40% zu beachten!

Cutting data recommendations for BULLtec®

When using the Bulltec® 2.0 system, a reduction in cutting data of 30 - 40% should be noted!

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成都办事处	电话: 86-28-8526-6681	传真: 86-28-8526-6684
重庆办事处	电话: 86-23-6757-3205	传真: 86-23-6757-3207
長春办事处	电话: 86-431-8461-7085	传真: 86-431-8461-7087
外高桥保税庫	电 话: 86-21-5868-3075	传真: 86-21-5868-3076
台北办事处	电话: 886-2-2705-8448	传真: 886-2-2700-8430
台中办事处	电话: 886-4-2463-8159	传真: 886-4-2463-8160