

专业从事金属复合耐磨材料产品的研发、生产和应用服务
国际顶级复合耐磨材料的提供者与服务商
亚洲金属复合材料领域综合实力最强企业
国家“专精特新小巨人企业”


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VIBO

# 耐磨材料研发商
# 耐磨产品制造商
# 耐磨方案提供商




**20+ 年**
工业磨损方案提供商

**20+ 年**
复合材料研发和制造经验

**18,000+ 吨**
年生产能力

**55,000 ㎡**
现代化车间

湖南浏阳经开区







长沙威尔保新材料有限公司是一家专业生产真空钎焊双金属、陶瓷镶嵌铸件、硬质合金耐磨件、铸造复合双金属、高铬铸件、镍硬铸件的制造商，员工超过300人；威尔保位于长沙浏阳国家级经济技术开发区，占地100亩，拥有55000平方米的现代化厂房，年产值3亿以上。作为真空钎焊双金属复合材料的国际顶级制造商和中国标准制定者，依托于中南大学国家重点实验室，威尔保现已成为亚洲最大的双金属耐磨件制造商。公司产品标准型号和模具超过5000种，更精于按客户要求定制，目前已经销往美国、加拿大、智利、巴西、澳大利亚、非洲、欧洲和东南亚等地区，涵盖矿业、石油、钢铁、水泥、电力、破碎、骨料、回收、疏浚、工程机械和制糖等行业。

威尔保生产设备齐全，从原材料到成品，所有生产环节都不需要外包。公司的一次浇筑产能超过10吨，拥有500公斤、1000公斤，1500公斤，2000公斤，2500公斤的中频感应炉、真空焊接炉、热处理炉、各式抛丸机、数控车床、平面磨床、覆膜砂和水玻璃砂生产线、壳型机、螺栓焊机、立锯、卧锯、立铣、卧铣、钻床、油压机、线切割机、火焰切割机、等离子下料机、硬质合金堆焊机等；双金属复合材料和其他高品质金属耐磨件总计年产能超过18000吨。

威尔保秉承“正直 专注 创新 高效”的经营理念，以品质求生存是公司的核心文化。公司拥有自主进出口权，有一批精通外贸业务、精通外语(包括英语、西班牙语、葡萄牙语、俄语、法语等)、精通国际物流的专业销售队伍。威尔保已经与国内外众多头部企业（如中国五矿/BHP/FMG/美卓）建立了稳定的业务关系，产品深受用户好评。长沙威尔保新材料有限公司欢迎新老客户来我厂考察指导工作，我们随时为您提供一流的服务！






# ABOUT VIBO

Changsha VIBO Wearable Material Co., LTD. is a professional manufacturer of vacuum-brazing bimetals, ceramic-inserted castings, tungsten carbide wear parts, cast composite bimetals, high chromium castings, Nihard castings, with more than 300 employees; VIBO is located in China Changsha, covering an area of 100 acres, with 55,000 square meters of modern factory workshop and an annual output value of more than USD40 million. As the world's top manufacturer of vacuum-brazing bimetallic composites and a Chinese standard-setter, VIBO has become the largest manufacturer of bimetallic wear-resistant parts in Asia which have been sold to the United States, Canada, Chile, Brazil, Australia, South Africa, Europe and Southeast Asia and other regions, covering mining, petroleum, steel, cement, electric power, crushing, aggregates, recycling, dredging, construction machinery and sugar industries.

VIBO is fully equipped for production, from raw materials to finished products, and all production links do not need to be outsourced. VIBO's one-time pouring capacity is more than 10tons, with 500kg, 1000kg, 1500kg, 2000kg, 2500kg of intermediate frequency induction furnace, vacuum-brazing furnace, heat treatment furnace, all kinds of shot blasting machines, CNC machine, surface grinders, coated sand and sodium glass sand production lines, shell machines, stud welding machines, vertical saws, horizontal saws, vertical mills, horizontal milling, drilling machines, hydraulic presses, wire cutting machines, flame cutting machines, plasma cutting machines, tungsten carbide hardfacing machines, etc.; The total annual production capacity of bimetallic composites and other high-quality metal wear parts is more than 18,000 tons.

VIBO adheres to the business philosophy of "integrity, focus, innovation and efficiency", and strives for survival by quality is the core culture of the company. VIBO has a group of professional sales teams who are proficient in foreign trade business, foreign languages, international logistics. VIBO has established stable business relations with many leading enterprises at home and abroad (such as China Minmetals/BHP/FMG/Metso). VIBO welcomes new and old customers to visit our factory any time, we are ready to provide you with first-class service!





# VIBO CERT 荣誉证书

VIBO is National "Specialized, Special and New Little Giant Enterprise". As a high-tech enterprise since 2015, VIBO has 15 invention patents and a number of utility model patents, and has been awarded the title of “Contract-abiding and Credit-keeping" unit for many years. VIBO is certified for ISO9001, environmental ISO14001 and health ISO45001.

威尔保是国家小巨人企业，自2015年起为高新技术企业，拥有15项发明专利和多项实用新型专利，连续多年荣获“守合同重信用”单位称号。公司通过ISO9001、环境IS014001和健康IS045001认证。以品质求生存是公司的核心文化。


证书号第6082436号

发明专利证书

发 明 名 称：一种高铬白口抗磨铸铁部件与金属部件的连接固定的方法

发 明 人：胡许先;许元根;刘守礼

专 利 号：ZL 2022 1 0509883.3

专利申请日：2022年05月11日

专 利 权 人：长沙威尔保新材料有限公司

地 址：410329 湖南省长沙市浏阳经济技术开发区南园

授权公告日：2023年06月23日　　授权公告号：CN 114807733 B

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局长
申长雨

2023年06月23日

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专精特新
“小巨人”企业

长沙威尔保新材料有限公司

工业和信息化部

有效期:2023年7月1日-2026年6月30日


高新技术企业

证书

企业名称：长沙威尔保新材料有限公司　　证书编号：GR202243000394

发证时间：2022 年 10 月 18 日　　有 效 期：三年

批准机关：


质量管理体系认证证书

注册号：46824Q0063R1M

兹 证 明

长沙威尔保新材料有限公司

统一信用代码：91430181070563992C

注册地址：湖南省浏阳经济技术开发区南园

管理体系符合

GB/T 19001-2016/ISO 9001:2015

覆盖范围

耐磨、抗冲击金属复合材料产品的研发、生产

测证日期：2024 年 03 月 18 日　　有效期至：2027 年 03 月 18 日

首发日期：2016 年 02 月 01 日

签发人


环境管理体系认证证书

注册号：46824E0050R1M

兹 证 明

长沙威尔保新材料有限公司

统一信用代码：91430181070563992C

注册地址：湖南省浏阳经济技术开发区南园

管理体系符合

GB/T 24001-2016/ISO 14001:2015

覆盖范围

耐磨、抗冲击金属复合材料产品的研发、销售相关环境管理活动

测证日期：2024 年 03 月 18 日　　有效期至：2027 年 03 月 18 日

首发日期：2021 年 03 月 19 日

签发人


职业健康安全管理体系认证证书

注册号：46824S0043R1M

兹 证 明

长沙威尔保新材料有限公司

统一信用代码：91430181070563992C

注册地址：湖南省浏阳经济技术开发区南园

管理体系符合

GB/T 45001-2020/ISO 45001:2018

覆盖范围

耐磨、抗冲击金属复合材料产品的研发、生产相关职业健康安全管理活动

测证日期：2024 年 03 月 18 日　　有效期至：2027 年 03 月 18 日

首发日期：2021 年 03 月 19 日

签发人

# VIBO QUALITY CONTROL
# 威尔保质量控制体系

VIBO has 6 well-equipped testing laboratories that implement the strictest quality control system according to ISO9001 standards. VIBO's laboratory equipment includes desktop and mobile spectrum analyzers, particle size testers, mud content testers, melting point testers, carbon and sulfur analyzers, universal testing machines, various hardness testers, ultrasonic flaw detectors, metallographic microscopes, high and low temperature impact testers, ASTM-G65 simulated wear testers, etc. VIBO can independently complete the testing of all key indicators of the product.

威尔保拥有6个设备齐全的检测实验室，按ISO9001标准执行最严格的质量控制体系。公司实验室设备包括台式和移动式光谱分析仪、颗粒度测试仪、含泥量测试仪、熔点测试仪、碳硫分析仪、万能力学试验机、各种硬度计、超声探伤仪、金相显微镜、高低温冲击试验仪、ASTM-G65模拟磨损仪等。公司能自主完成产品的所有关键指标检测。


Chemical Composition Testing


Hardness testing


Ultrasonic Testing


Impact strength Testing


Shear Strength Testing

VIBO commit to replace defective goods 100% .

**威尔保承诺100%更换有质量问题的产品！**

Before shipment VIB0 all products must pass inspection at least including chemical, hardness, strength, ultrasonic, micro structure, visual and inspection report will be submitted to customers at the same time. VIB0 also can provide other inspection report submitted from University based on customers special requirement.

在发货的同时，公司提供完整的质量检测报告(如化学成分分析，强度、硬度、微观组织分析等)

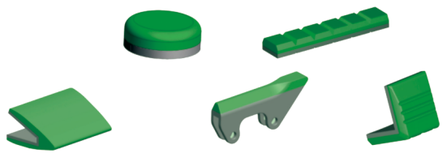
# ABOUT VIBO BIMETALLIC COMPOSITES "双威"超级耐磨块

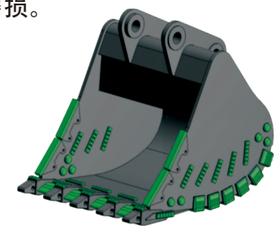
- Advantage of VIBO Bi-metal wear parts:

1. VIB0 bimetallic composites is made by bonding CWI(White Iron Casting) Wear material onto a mild backing steel. The shear strength of bonding interface is over 320Mpa.
2. Min.63HRC(725HB+) hardness of CWI provides very high wear resistant qualities, while the steel backing plate acts as a meaning of absorbing high impacts and allows easy to use and install with no pre or post heating when welding.
3. Obvious cost-effective advantage, suitable for abrasive wear in various occasions.

- 威尔保双威超级耐磨块的优势性能：

1. 长沙威尔保的"双威"超级耐磨块是由耐磨合金层和软钢背板层复合而成，复合界面的抗剪强度超过320Mpa。耐磨层硬度达到63HRC以上，安装层既可以吸收冲击功，又方便加工和安装。
2. 优良的耐磨性、耐腐蚀、热强性、抗侵蚀、耐摩擦、 红硬性、抗高温、抗氧化、韧性、焊接性、可加工性、 装配性；
3. 明显的性价比优势,尺寸和形状多样,适用于各种场合的磨料磨损。





HIGH WEAR RESISTANCE + IMPACT RESISTANCE + EASY INSTALATION =
fewer maintenance time + less down time + more output

**高耐磨+抗冲击+易于安装=更少的维护时间+更少的停机时间+更大的产出**

VIBO's wear parts are widely applied in industries including Mining, Quarrying, Aggregate,Oil sand, steel-making,Power plant, Cement plant, Dredging, port, Sugar mill, Re-cycling, wood pulp, papermaking, coal and other Heavy Industries. Typical applications include bucket surface, Dumping truck body, Chute/hopper/Bin Liners, Gyratory Liners, Spider Arm, Vertical Granding Mills liners, Feeding chute/pipe, Impact crusher liners, pump liners, cheek plate, Shredder hammer, sugar mill knife edge and so on.

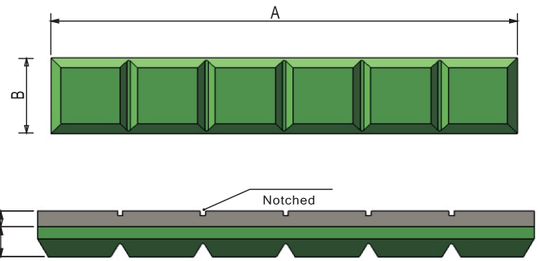
长沙威尔保的双威超级耐磨块广泛应用于采矿、采石、骨料、石油管道，炼钢、火力发电厂、水泥厂、疏浚、糖厂、回收、木浆、造纸，煤炭和其他重工业。典型应用场合包括：挖斗表面，矿卡（电动轮）斗床，矿料输送机挡板，卸(下）料槽，布（分）料槽，皮带输送机转/卸料槽，旋回破横梁/衬板，震动筛格栅条，反击破内衬板，炼铁高炉内衬板，热轧板坯轧机导轨，热轧板翻转台，给料小车衬板，磨机给料弯管/衬板/筛板，塔磨浆叶，钢厂烧结床炉篦条，疏浚船铰刀头，水泥厂/金属回收锤破锤，水泥厂/选矿厂高压对辊机颊板，榨糖厂破碎机锤头和铡刀，造纸厂木头破碎刀，垃圾处理厂压机头，渣浆泵内衬叶轮等。





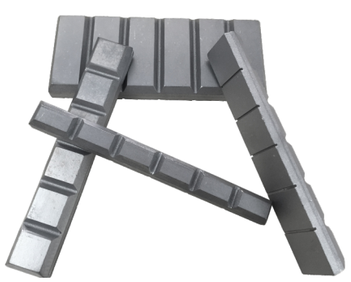
# VIBO CHOCKY BARS 齿轮条系列

Used for a variety of wear protection on buckets, excavators, dragline machines or for lining chutes and rock box edges, VIBO Chocky Bars are available in a wide range of sizes. Thanks to the grooves and chocky shape, they can be bent, slit and formed onto inside or outside contoured surfaces easily.
主要用于电铲铲斗的表面，可以弯曲或折断，易于安装。




Chocky bars' standard thickness is 23mm, length is 240mm, width from 25mm to 150mm. VIBO can supply special type according to customers drawing.
齿轮条的标准厚度为23mm, 标准长度为240mm, 宽度从 25mm 到150mm

| Part No | Size(mm) | Dimension(mm) | | | | | Unit Weight |
|---|---|---|---|---|---|---|---|
| | | A | B | C | D | E | (kgs) |
| CB25 | 240x25x23 | 240 | 25 | 15 | 8 | 23 | 0.9 |
| CB40 | 240x40x23 | 240 | 40 | 15 | 8 | 23 | 1.5 |
| CB50 | 240x50x23 | 240 | 50 | 15 | 8 | 23 | 1.9 |
| CB65 | 240x65x23 | 240 | 65 | 15 | 8 | 23 | 2.5 |
| CB100 | 240x100x23 | 240 | 100 | 15 | 8 | 23 | 3.9 |
| CB130 | 240x130x23 | 240 | 130 | 15 | 8 | 23 | 5.4 |
| CB150 | 240x150x23 | 240 | 150 | 15 | 8 | 23 | 6.0 |













# VIBO WEAR BUTTONS & DONUTS

## 圆形和圆环系列

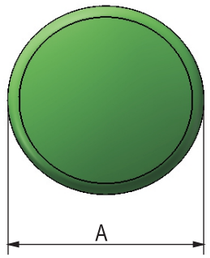
Easy to use and install in application ranging from specific wear protection on buckets and GET for loaders, excavators and drag-lines, to convey or transfer.
主要用于铲斗的表面以保护铲斗。

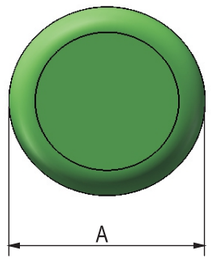


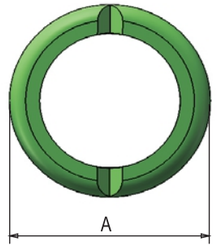


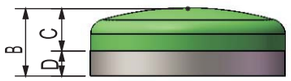


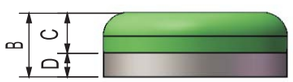


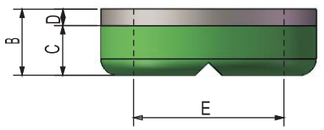


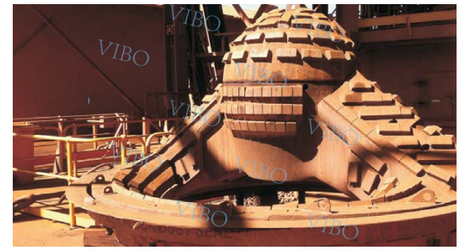




| Part No | Type | Size(mm) | Dimensions(mm) | | | | | Unit Weight(kgs) |
|---|---|---|---|---|---|---|---|---|
| | | | A | B | C | D | E | |
| WDB60 | Dome Buttons | Φ60×27 | 60 | 27 | 17 | 10 | | 0.7 |
| WDB75 | Dome Buttons | Φ75×27 | 75 | 27 | 17 | 10 | | 0.9 |
| WDB90 | Dome Buttons | Φ90×27 | 90 | 27 | 17 | 10 | | 1.2 |
| WDB115 | Dome Buttons | Φ115×32 | 115 | 32 | 20 | 12 | | 2.6 |
| WDB150 | Dome Buttons | Φ150×41 | 150 | 41 | 25 | 16 | | 5.7 |
| WD75 | Donut | Φ75×25 | 75 | 25 | 17 | 8 | 25 | 0.7 |
| WD100 | Donut | Φ100×25 | 100 | 50 | 17 | 8 | 25 | 1.0 |
| WD101 | Donut | Φ100×32 | 100 | 70 | 24 | 8 | 32 | 1.0 |
| WD130 | Donut | Φ130×23 | 130 | 80 | 15 | 8 | 23 | 1.3 |



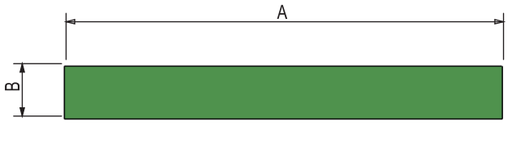


# VIBO WEAR BARS AND BLOCKS

## 矩形条系列

Rectangular bars are available in thicknesses ranging from 25mm to 100mm, widths from 25mm to 300mm and in varying lengths. Popular for use in rock box protection, impact areas and transfer points, bars can be provided with Nelson studs with size and location to suit.

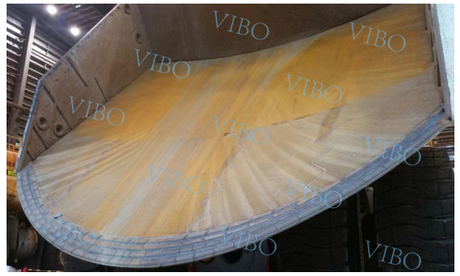
矩形条的常规厚度从25mm到100mm, 宽度
25mm到300mm, 长度可以到1000mm.






| Part No | Type | Size(mm) | Dimensions(mm) | | | | | Unit Weight(kgs) |
|---|---|---|---|---|---|---|---|---|
| | | | A | B | C | D | E | |
| VLB100 | STD | 200×25×25 | 200 | 25 | 15 | 10 | 25 | 1.0 |
| VLB150 | STD | 300×25×25 | 300 | 25 | 15 | 10 | 25 | 1.5 |
| VLB110 | STD | 195×25×30 | 195 | 25 | 20 | 10 | 30 | 1.1 |
| VLB420 | STD | 459×38×31 | 459 | 38 | 25 | 6 | 31 | 4.2 |
| VLB153 | STD | 153×38×33 | 153 | 38 | 25 | 8 | 33 | 1.5 |
| VLB300 | STD | 300×38×33 | 300 | 38 | 25 | 8 | 33 | 3.0 |
| VLB090 | STD | 102×33×33 | 102 | 33 | 25 | 8 | 33 | 0.9 |
| VLB220 | STD | 190×50×30 | 190 | 50 | 20 | 10 | 30 | 2.2 |
| VLB290 | STD | 150×50×50 | 150 | 50 | 40 | 10 | 50 | 2.9 |
| VLB410 | STD | 210×50×50 | 210 | 50 | 38 | 12 | 50 | 4.1 |
| VLB450 | STD | 230×50×50 | 230 | 50 | 38 | 12 | 50 | 4.5 |
| VLB500 | STD | 254×50×50 | 254 | 50 | 40 | 10 | 50 | 5.0 |
| VLB580 | STD | 294×50×50 | 294 | 50 | 40 | 10 | 50 | 5.7 |
| VLB850 | STD | 432×50×50 | 432 | 50 | 38 | 12 | 50 | 8.5 |
| VLB1180 | STD | 600×50×50 | 600 | 50 | 38 | 12 | 50 | 11.8 |
| VLB540 | STD | 230×50×60 | 230 | 50 | 40 | 20 | 60 | 5.4 |
| VLB160 | STD | 203×51×20 | 203 | 51 | 12 | 8 | 20 | 1.6 |
| VLB200 | STD | 254×51×20 | 254 | 51 | 12 | 8 | 20 | 2.0 |
| VLB244 | STD | 127×51×48 | 127 | 51 | 38 | 10 | 48 | 2.4 |
| VLB240 | STD | 250×60×20 | 250 | 60 | 12 | 8 | 20 | 2.4 |
| VLB340 | STD | 150×75×39 | 150 | 75 | 29 | 10 | 39 | 3.4 |
| VLB440 | STD | 150×75×50 | 150 | 75 | 40 | 10 | 50 | 4.4 |
| VLB530 | STD | 150×75×60 | 150 | 75 | 50 | 10 | 60 | 5.3 |
| VLB890 | STD | 200×75×75 | 200 | 75 | 63 | 12 | 75 | 8.8 |
| VLB610 | STD | 194×80×50 | 194 | 80 | 38 | 12 | 50 | 6.1 |
| VLB920 | STD | 294×80×50 | 294 | 80 | 38 | 12 | 50 | 9.2 |
| VLB1100 | STD | 241×100×58 | 241 | 100 | 38 | 20 | 58 | 11 |
| VLB2110 | STD | 300×150×60 | 300 | 150 | 48 | 12 | 60 | 21 |

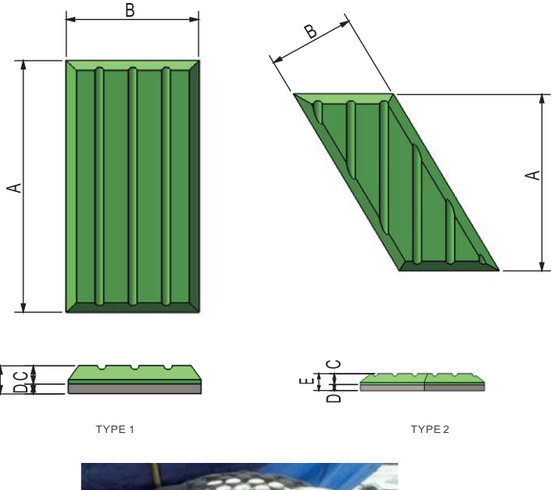






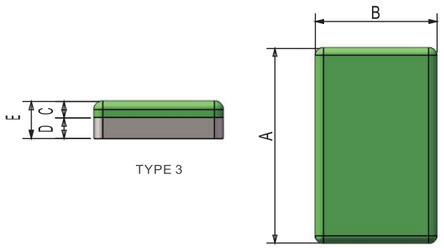
# VIBO SKID BARS 滑槽板

Skid bar is designed to protect and extand life of mining and quarrying heavy buckets for wheel loaders. excavator and dippers.Skid bars are commonly used on most high capacity. heavy duty buckets for wheel loaders, excavators and dippers
主要用于矿车和挖斗，大量用于矿山和采石场。







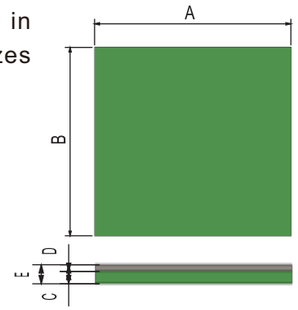

| Part No | Type | Size(mm) | Dimensions(mm) | | | | | Unit Weight(kgs) |
|---|---|---|---|---|---|---|---|---|
| | | | A | B | C | D | E | |
| VSK11 | 1 | 214*101*34 | 214 | 101 | 22 | 12 | 34 | 5.1 |
| VSK12 | 1 | 302*101*34 | 302 | 101 | 22 | 12 | 34 | 7.3 |
| VSK13 | 1 | 154*101*34 | 154 | 101 | 22 | 12 | 34 | 3.7 |
| VSK14 | 1 | 279*75*34 | 279 | 75 | 22 | 12 | 34 | 6.1 |
| VSK21 | 2 | 214*101*34 | 214 | 101 | 22 | 12 | 34 | 5.9 |
| VSK22 | 2 | 304*101*34 | 304 | 101 | 22 | 12 | 34 | 8.4 |
| VSK23 | 2 | 154*101*34 | 154 | 101 | 22 | 12 | 34 | 4.2 |
| VSK31 | 3 | 250*150*45 | 250 | 150 | 20 | 25 | 45 | 13.1 |
| VSK32 | 3 | 200*150*45 | 200 | 150 | 20 | 25 | 45 | 10.5 |
| VSK33 | 3 | 250*250*45 | 250 | 250 | 20 | 25 | 45 | 21.9 |





# VIBO WEAR PLATES 衬板

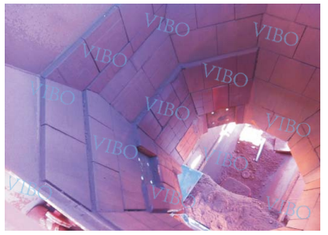
Used to effectively cover areas such as chutes, hoppers, bins, impact walls, screen plates, and general wear protection in many proven fixed plant applications. Available in various sizes or made to customer requirements
广泛用于矿山和钢厂的料槽和高炉内衬，可定制。









| Part No | Type | Size(mm) | Dimensions(mm) | | | | | Unit Weight(kgs) |
|---|---|---|---|---|---|---|---|---|
| | | | A | B | C | D | E | |
| VWP11 | 1 | 400*400*23 | 400 | 400 | 15 | 8 | 23 | 28.7 |
| VWP21 | 2 | 200*200*20 | 200 | 200 | 10 | 10 | 20 | 6.3 |
| VWP22 | 2 | 300*300*18 | 300 | 300 | 12 | 6 | 18 | 12.7 |
| VWP31 | 3 | 445*445*25 | 445 | 445 | 19 | 6 | 25 | 38.9 |
| VWP32 | 3 | 372*372*28 | 372 | 372 | 20 | 8 | 28 | 30.4 |
| VWP33 | 3 | 300*300*30 | 300 | 300 | 20 | 10 | 30 | 21.2 |
| VWP34 | 3 | 294*294*30 | 294 | 294 | 20 | 10 | 30 | 20.4 |
| VWP35 | 3 | 294*144*30 | 294 | 144 | 20 | 10 | 30 | 10.2 |
| VWP36 | 3 | 206*203*58 | 206 | 203 | 38 | 20 | 58 | 19.0 |
| VWP37 | 3 | 301*200*28 | 301 | 200 | 18 | 10 | 28 | 13.2 |
| VWP38 | 3 | 305*150*26 | 305 | 150 | 18 | 8 | 26 | 9.3 |



# VIBO SHREDDER HAMMER TIPS

破碎机锤头

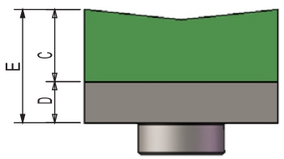




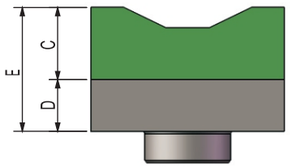
# VIBO TUNGSTEN CARBIDE HAMMER TIP

硬质合金三层锤头

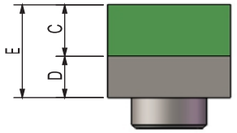




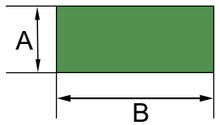

TYPE2




TYPE3




TYPE1



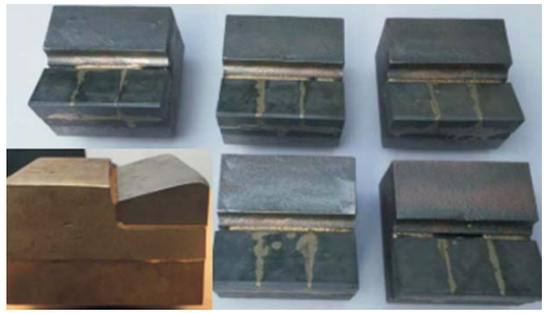

Availablein various type.hammer tips are widely used in sugarcaneshredding and coal crusher.
主要用于糖厂的破碎机部分。

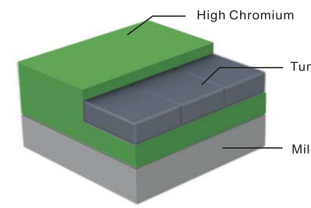


| Part No | Type | Size(mm) | Dimensions(mm) | | | | | Unit Weight(kgs) |
|---|---|---|---|---|---|---|---|---|
| | | | A | B | C | D | E | |
| H175 | 1 | 75x75x45 | 75 | 75 | 25 | 20 | 45 | 2 |
| H180 | 1 | 80x56x45 | 80 | 56 | 25 | 20 | 45 | 1.6 |
| H181 | 1 | 80x80x45 | 80 | 80 | 25 | 20 | 45 | 2.4 |
| H190 | 1 | 90x50x45 | 90 | 50 | 25 | 20 | 45 | 1.6 |
| H191 | 1 | 90x90x45 | 90 | 90 | 25 | 20 | 45 | 2.9 |
| H100 | 1 | 100x100x45 | 100 | 100 | 25 | 20 | 45 | 3.6 |
| H280 | 2 | 80x56x55 | 80 | 56 | 35 | 20 | 55 | 1.9 |
| H290 | 2 | 90x90x55 | 90 | 90 | 35 | 20 | 55 | 3.1 |
| H291 | 2 | 90x50x55 | 90 | 50 | 35 | 20 | 55 | 1.8 |
| H380 | 3 | 80x56x50 | 80 | 56 | 30 | 20 | 50 | 1.9 |
| H390 | 3 | 90x90x50 | 90 | 90 | 30 | 20 | 50 | 3.3 |

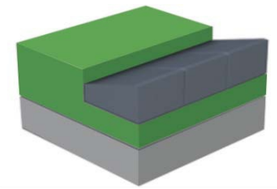
Technical data:
Hardness of Tungsten carbide:Min.HRA90
Hardness of white iron:Min.63HRC(725HB+)
Bonding shear strength between white iron and mild backing steel:Over 300Mpa
Wear life basically outlast normal material hammer tips by a factor grater than 5:1



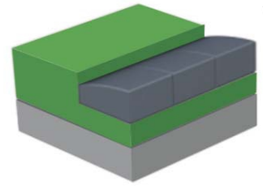





Flat Carbide Tip

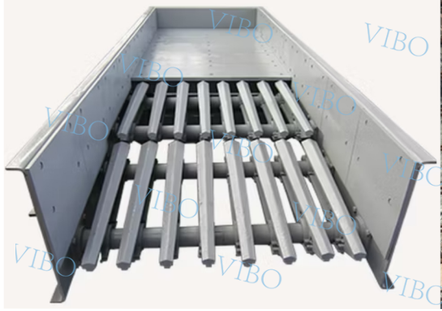


Wedge Carbide Tip



Curved Carbide Tip

| VIBO Hammer tip Reference in an Australian Sugar Factory | | |
|---|---|---|
| Application Comparison | Tungsten carbide tip 90x90x50 flat | White iron tip 90x90x55 wedge |
| Cane Crushing | 400,000-600,000 Ton (one side) | 150,000 Ton (75,000x2) (two sides) |
| Abrasiveness | 5 to 8 times of white iron | |
| Wear Life | 3-4 weeks | 2 weeks |
| Stop for Tip Turn | No stop | One stop |



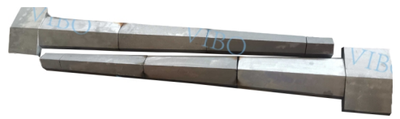
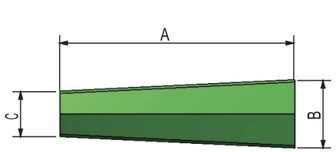
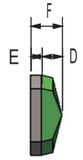





# VIBO GRIZZLY BARS 格栅条

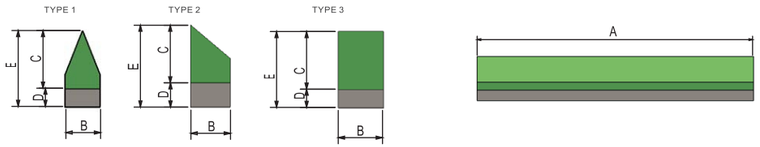
Grizzly bar caps are available in width ranging from 75mm to 150mm and generallymade in 305mm long sections with a number of different tapers offered to suit customer needs including mines,quarries and sinter process plants.
主要用于需要进行材料筛选的地方。

| Part No | Size(mm) | Dimensions(mm) | | | | | | Unit Weight(kgs) |
|---|---|---|---|---|---|---|---|---|
| | | A | B | C | D | E | F | |
| VGB10 | 305*150*137.5 | 305 | 150 | 137.5 | 38 | 12 | 50 | 13.5 |
| VGB11 | 305*137.5*125 | 305 | 137.5 | 125 | 38 | 12 | 50 | 12.5 |
| VGB12 | 305*125*112.5 | 305 | 125 | 112.5 | 38 | 12 | 50 | 11.2 |
| VGB13 | 305*112.5*100 | 305 | 112.5 | 100 | 38 | 12 | 50 | 10.0 |
| VGB14 | 305*100*87.5 | 305 | 100 | 87.5 | 38 | 12 | 50 | 8.8 |
| VGB15 | 305*87.5*75 | 305 | 87.5 | 75 | 38 | 12 | 50 | 7.5 |
| VGB16 | 305*75*62.5 | 305 | 75 | 62.5 | 38 | 12 | 50 | 6.3 |
| VGB17 | 305*62.5*50 | 305 | 62.5 | 50 | 38 | 12 | 50 | 5.1 |
| VGB18 | 305*150*141 | 305 | 150 | 141 | 38 | 12 | 50 | 13.8 |
| VGB19 | 305*141*131 | 305 | 141 | 131 | 38 | 12 | 50 | 12.9 |
| VGB20 | 305*131*122 | 305 | 131 | 122 | 38 | 12 | 50 | 11.9 |
| VGB21 | 305*122*113 | 305 | 122 | 113 | 38 | 12 | 50 | 11.1 |
| VGB22 | 305*113*103 | 305 | 113 | 103 | 38 | 12 | 50 | 10.1 |
| VGB23 | 305*103*94 | 305 | 103 | 94 | 38 | 12 | 50 | 9.2 |
| VGB24 | 305*94*84 | 305 | 94 | 84 | 38 | 12 | 50 | 8.3 |
| VGB25 | 305*84*75 | 305 | 84 | 75 | 38 | 12 | 50 | 7.4 |

# VIBO KNIFE EDGES 刀片

Specifically designed for the sugar industry utilising a sharp edge for maximum shredding efficiency.
主要用于糖厂，用于切割甘蔗。

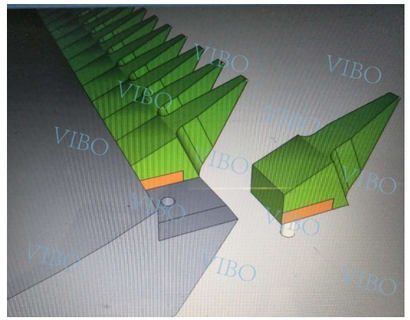


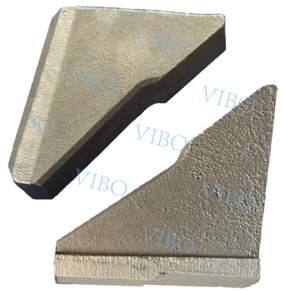
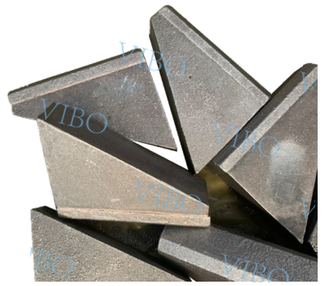
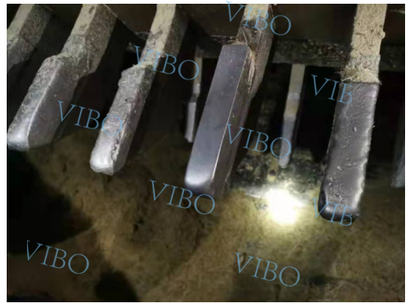

| Part No | Type | Size(mm) | Dimensions(mm) | | | | | Unit Weight(kgs) |
|---|---|---|---|---|---|---|---|---|
| | | | A | B | C | D | E | |
| VKE1203-16 | 1 | 203x16x50 | 203 | 16 | 38 | 12 | 50 | 0.9 |
| VKE1203-19 | 1 | 203x19x50 | 203 | 19 | 38 | 12 | 50 | 1.1 |
| VKE1203-22 | 1 | 203x22x50 | 203 | 22 | 38 | 12 | 50 | 1.3 |
| VKE1203-25 | 1 | 203x25x50 | 203 | 25 | 38 | 12 | 50 | 1.5 |
| VKE1305-16 | 1 | 305x16x50 | 305 | 16 | 38 | 12 | 50 | 1.4 |
| VKE1305-19 | 1 | 305x19x50 | 305 | 19 | 38 | 12 | 50 | 1.6 |
| VKE1305-22 | 1 | 305x22x50 | 305 | 22 | 38 | 12 | 50 | 1.9 |
| VKE1305-25 | 1 | 305x25x50 | 305 | 25 | 38 | 12 | 50 | 2.2 |
| VKE2203-16 | 2 | 203x16x50 | 203 | 16 | 38 | 12 | 50 | 1.0 |
| VKE2203-25 | 2 | 203x25x50 | 203 | 25 | 38 | 12 | 50 | 1.7 |
| VKE2305-25 | 2 | 305x25x56 | 305 | 25 | 40 | 16 | 56 | 2.5 |
| VKE3203-19 | 3 | 203x19x50 | 203 | 19 | 38 | 12 | 50 | 1.6 |
| VKE3203-25 | 3 | 203x25x50 | 203 | 25 | 38 | 12 | 50 | 2.1 |
| VKE3203-28 | 3 | 203x28x50 | 203 | 28 | 38 | 12 | 50 | 2.3 |





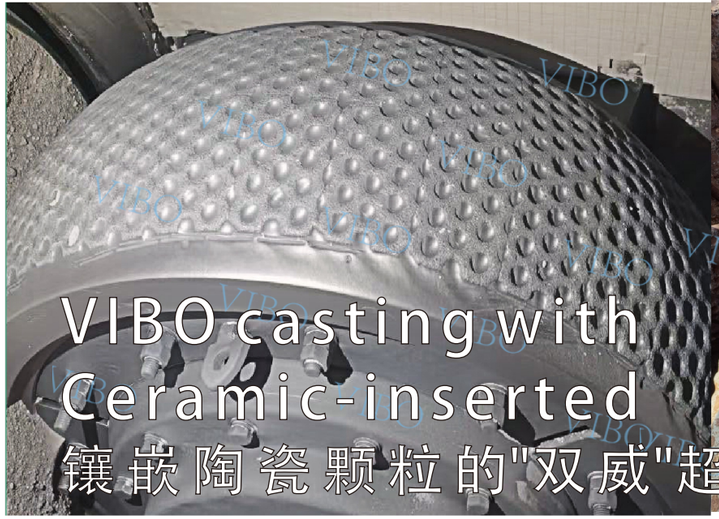
# VIBO Trashplate/Grid Bar/Grid Box/Grid plate for sugarmill 榨糖厂耐磨件











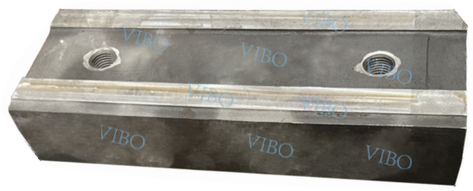
# VIBO casting with Ceramic-inserted
# 镶嵌陶瓷颗粒的"双威"超级耐磨块

Attributed to ceramic(ZrO2) high wear-resistant, High-chrome white iron casting(such as blow bar) with ceramic inserted can double wear life or more than normal white iron casting.

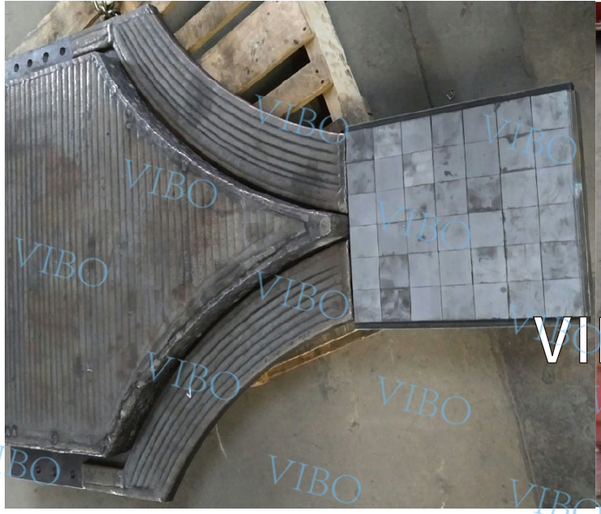
相比于普通高铬铸件，镶嵌陶瓷的高铬铸件通常能获得2倍或者更长的使用寿命。常见产品有板锤、方锤、反击板，用于磨损非常严重的地方。









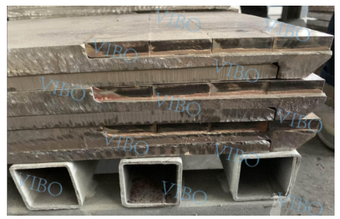


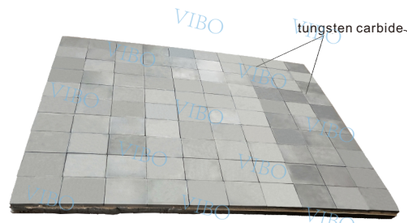


# VIBO Wear parts with Tungsten carbide
# 硬质合金耐磨件

真空钎焊硬质合金耐磨件，根据客户要求定制

Vacuum-brazing wear parts with tungsten carbide tile,customized products.

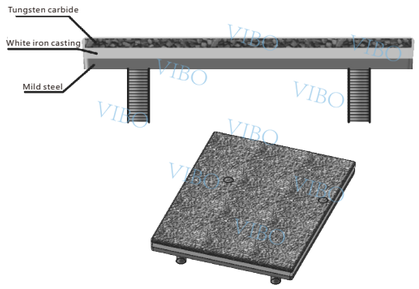




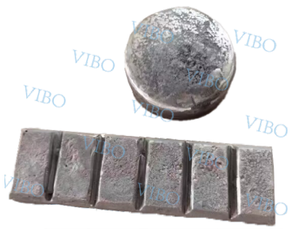



镶嵌硬质合金颗粒耐磨件

Wear parts with tungsten carbide particles inserted.







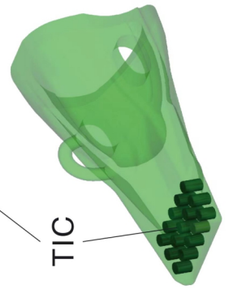
堆焊硬质合金耐磨件/TIC镶嵌

Hardfacing with tungsten carbide particles/powder/TIC-Inserted.















# VIBO Casting bonding
# 双液合金耐磨件

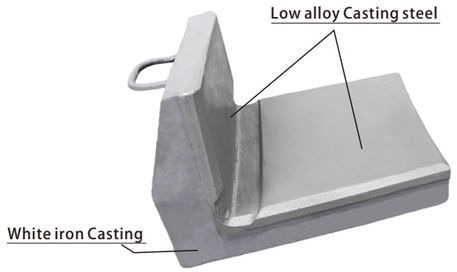






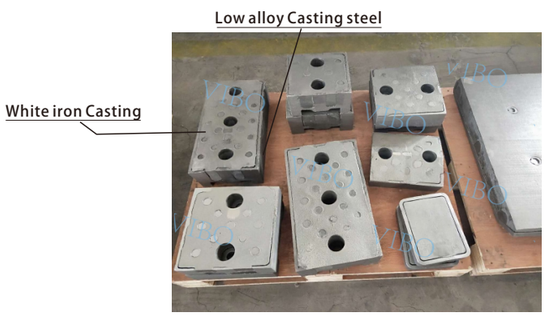


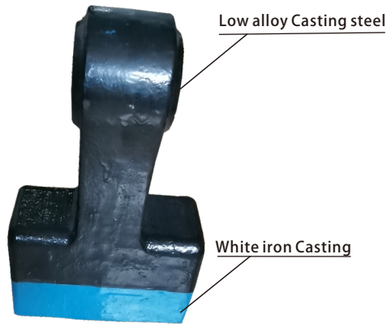
Based on the casting compound,white iron casting and low alloy casting combine together to achieve the purpose of improving wear resistance,ease to assemble.lower cost than vacuum-brazing.
铸造双金属耐磨件成本比真空钎焊更低。



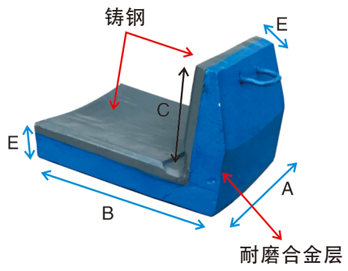








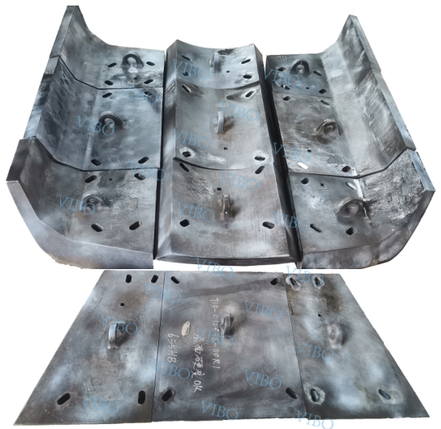




| 型号 | 单重(kg) | A(mm) | B(mm) | C(mm) | D(mm) | E(mm) | 形状 |
|---|---|---|---|---|---|---|---|
| Hp100 | 6.3 | 101 | 150 | 120 | 12 | 34 | 直面 |
| Hp113 | 10.4 | 130 | 200 | 135 | 12 | 34 | 直面 |
| Hp116 | 16.5 | 160 | 250 | 150 | 14 | 36 | 直面 |
| Hp117 | 13.6 | 175 | 205 | 120 | 14 | 36 | 直面 |
| Hp118 | 18.5 | 180 | 195 | 135 | 14 | 36 | 直面 |
| Hp119 | 22 | 190 | 275 | 165 | 14 | 36 | 直面 |
| Hp190 | 15 | 190 | 200 | 110 | 18 | 45 | 弧面 |
| Hp250 | 25 | 190 | 250 | 100 | 18 | 55 | 弧面 |
| Hp300 | 45 | 250 | 300 | 150 | 18 | 55 | 弧面 |

VIBO Roofliners/Reclaimer parts/Ball mill liners/Feeding chute liners/Feeding Pipe/ Gyratory concave Segment/Vertical Granding mills liners
围顶衬块/取料斗护块/球磨机衬板/给料小车衬板/给料管/旋回破衬板/塔磨浆片

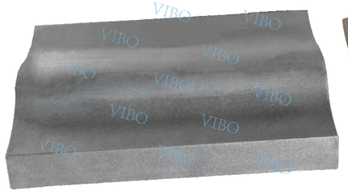




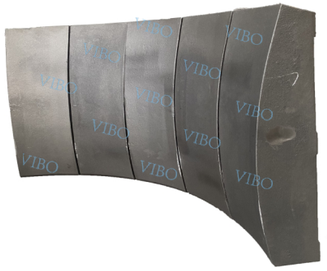


















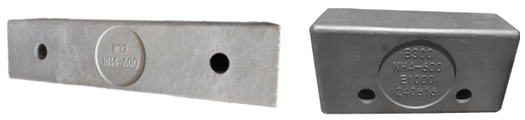

Nihard-4 and Chrome Molybdenum(CrMo) is a well-established white iron product alloyed with nickel(or Molybdenum) and chromium to give significant abrasion and impact resistant properties. Hardness is more than 650HB. Nihard-4 and CrMo are the perfect material for chutes, drop boxes, bin and hopper liners.

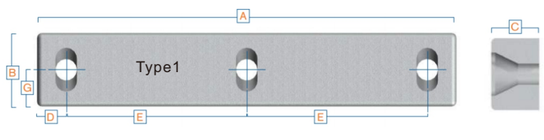
威尔保目前的镍硬材质主要为镍硬4和镍硬1，白口铁分普通高铬（ASTM A532 2B)和高钼铸铁(15Cr3Mo)。镍硬4的主要合金元素为4.0%~6.0%的镍和8%~9%的铬，其微观组织包括硬且耐磨的马氏体基体和M3C 型碳化物，宏观硬度超过650HB。高钼铸铁含有3%左右的钼，钼可以极大的提高铬铁的淬透性和耐磨性能，耐磨性优于普通白口铸铁。耐磨块流行尺寸见下表，可以线切割成异型，也可以定制。镍硬和白口铁已经成为保护溜槽和料斗的重要耐磨材料，在采矿、电力、水泥、陶瓷和铸造等行业得到广泛的应用。

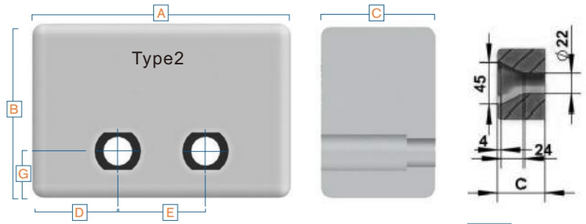
提供各种尺寸的螺栓/螺母/垫圈
耐磨块特殊尺寸可以定制！

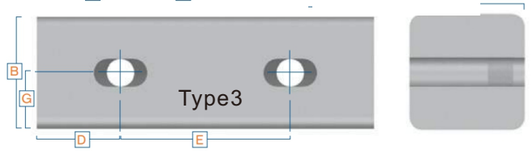
Nihard-4 and CrMo billets镍4或者高铬材质的方条
Standard Dimensions & Weights标准尺寸和单重

| Item# | Type 类型 | Dimension详细尺寸(mm) | | | | | | Hole type 孔型 | unit weight |
|---|---|---|---|---|---|---|---|---|---|
| | | A | B | C | D | E | G | | 净重(kg) |
| VB128 | 1 | 128 | 75 | 50 | 30 | 68 | 37.5 | M20 fishtail bolts | 3 |
| VB210 | 1 | 210 | 75 | 50 | 30 | 150 | 37.5 | | 6 |
| VB432 | 1 | 432 | 75 | 50 | 30 | 186 | 37.5 | | 12 |
| B224 | 2 | 224 | 150 | 100 | 74 | 186 | 40 | M20 Bolt Hex Head | 25 |
| B300 | 2 | 300 | 150 | 100 | 74 | 152 | 40 | | 33 |
| WB1 | 3 | 302 | 100 | 100 | 75 | 152 | 50 | M22 fishtail bolts | 22 |
| WB2 | 3 | 454 | 100 | 100 | 75 | 304 | 50 | | 34 |



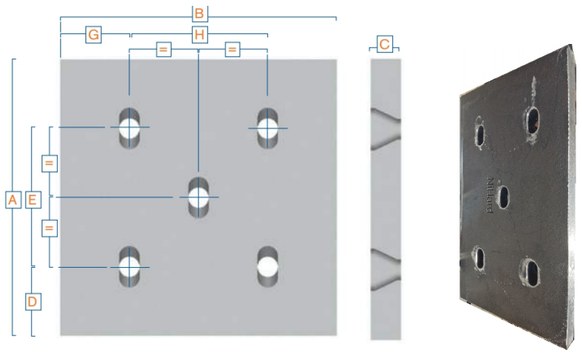



Nihard-4 liners镍4衬板
Standard Dimensions & Weights标准尺寸和单重

| Ref No. | Dimensions A | B | C | D | E | G | H | Mass (Kg) |
|---|---|---|---|---|---|---|---|---|
| S1 | 452 | 300 | 32 | 112 | 228 | 74 | 152 | 35 |
| S6 | 300 | 300 | 32 | 74 | 152 | 74 | 152 | 23 |
| S7 | 404 | 300 | 32 | 100 | 204 | 74 | 152 | 32 |
| S12 | 452 | 264 | 32 | 112 | 228 | 65 | 134 | 30 |
| S13 | 376 | 264 | 32 | 93 | 190 | 65 | 134 | 25 |
| S16 | 388 | 300 | 32 | 96 | 196 | 74 | 152 | 30 |
| S100 | 544 | 300 | 32 | 135 | 274 | 74 | 152 | 41 |



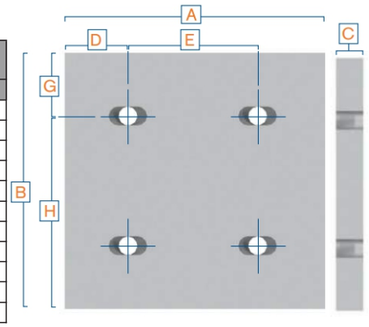

Bolts can be M20 or M22. 可以配M20或者M22的鱼尾螺杆来安装。






Nihard-4 and CrMo liners镍4或者高铬材质的衬板
Standard Dimensions & Weights标准尺寸和单重

| Item# Part#型号 | 尺寸 Dimensions(mm) A | B | C | D | E | G | H | 单重(kg) Unitweight |
|---|---|---|---|---|---|---|---|---|
| L1 Nihard-4 or CrMO | 444 | 444 | 32 | 70 | 304 | 70 | 304 | 50 |
| L2 Nihard-4 or CrMO | 444 | 216 | 32 | 70 | 304 | 70 | - | 24 |
| L3 Nihard-4 or CrMO | 444 | 292 | 32 | 70 | 304 | 70 | 152 | 33 |
| L4 Nihard-4 or CrMO | 444 | 140 | 32 | 70 | 304 | 70 | - | 16 |
| L6 Nihard-4 or CrMO | 292 | 140 | 32 | 70 | 152 | 70 | - | 10 |
| L18 Nihard-4 or CrMO | 292 | 292 | 32 | 70 | 152 | 70 | 152 | 22 |
| L3W Nihard-4 or CrMO | 452 | 300 | 32 | 74 | 304 | 74 | 152 | 34 |
| L4W Nihard-4 or CrMO | 452 | 148 | 32 | 74 | 304 | 74 | - | 17 |
| L18W Nihard-4 or CrMO | 300 | 300 | 32 | 74 | 152 | 74 | 152 | 23 |
| L6W Nihard-4 or CrMO | 300 | 148 | 32 | 74 | 152 | 74 | - | 11 |
| L2W Nihard-4 or CrMO | 452 | 224 | 32 | 74 | 304 | 74 | - | 26 |

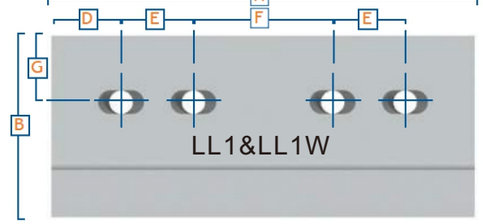


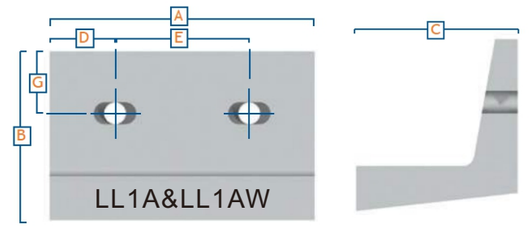



Nihard-4 Lip liners镍4 衬板（L型），配M22的鱼尾螺杆
Standard Dimensions & Weights标准尺寸和单重

| Item# Part#型号 | 尺寸 Dimensions(mm) A | B | C | D | E | F | G | 单重(kg) Unitweight |
|---|---|---|---|---|---|---|---|---|
| LL1A | 304 | 191 | 178 | 76 | 152 | - | 71 | 30 |
| LL1AW | 312 | 191 | 178 | 80 | 152 | - | 71 | 30 |
| LL1 | 444 | 191 | 178 | 70 | 76 | 152 | 71 | 44 |
| LL1W | 452 | 191 | 178 | 74 | 76 | 152 | 71 | 45 |

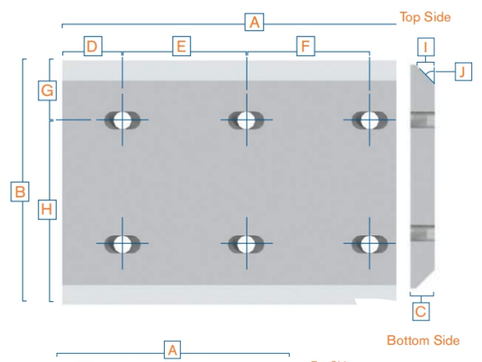
Bolts can be M20 or M22.
可以配M20或者M22的鱼尾螺杆来安装

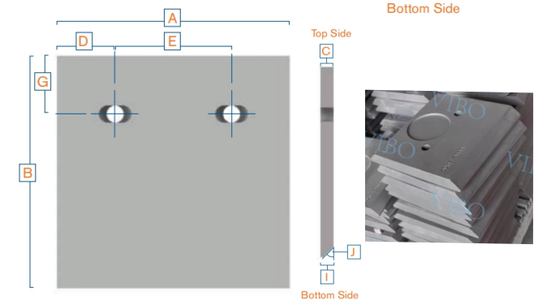



Nihard-4 and CrMo skirt-liners镍4或者高铬材质的裙板
Standard Dimensions & Weights标准尺寸和单重

| Item# Part#型号 | Hole type | 尺寸 Dimension(mm) A | B | C | D | E | F | G | H | I | J° | 单重 (kg) Unitweight |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SL26 | M16 | 495 | 220 | 32 | 122.5 | 250 | - | 110 | - | 25 | 55 B | 26 |
| L1S | M20 | 296 | 296 | 20 | 73 | 150 | - | 73 | 150 | 20 | 45 B | 13 |
| S6C | M20 | 300 | 364 | 32 | 74 | 152 | | 106 | 152 | 27 | 45 B | 23 |
| S96C | M20 | 300 | 364 | 32 | 74 | 152 | - | 182 | - | 27 | 45 B | 24 |
| S96Cm-2 | M20 | 300 | 225 | 32 | 74 | 152 | - | 43 | - | 27 | 45 Y | 17 |
| S98C | M20 | 300 | 288 | 32 | 74 | 152 | - | 144 | - | 27 | 45 B | 17 |
| N4 | M20 | 296 | 296 | 32 | 73 | 150 | - | 73 | 150 | 32 | 45 B | 20 |
| 496S | M22 | 496 | 260 | 25 | 123 | 250 | - | 130 | - | 12.5 | 45 B | 25 |
| 300S | M22 | 294 | 309 | 32 | 72 | 150 | | 154.5 | - | 27 | 45 B | 23 |
| 450S | M22 | 444 | 309 | 32 | 72 | 150 | 150 | 154.5 | - | 27 | 45 B | 34 |
| SL1CrMO | M22 | 444 | 292 | 32 | 70 | 304 | | 70 | | 16 | 45 Y | 32 |
| SL1W Nihard4 or CrMo | M22 | 452 | 296 | 32 | 74 | 304 | - | 74 | - | 16 | 45 Y | 33 |
| SL18W Nihard4 or CrMo | M22 | 300 | 300 | 32 | 74 | 152 | - | 60 | - | 16 | 45 Y | 22 |
| SL3W Nihard4 or CrMo | M22 | 300 | 224 | 32 | 74 | 152 | - | 60 | - | 16 | 45 Y | 17 |



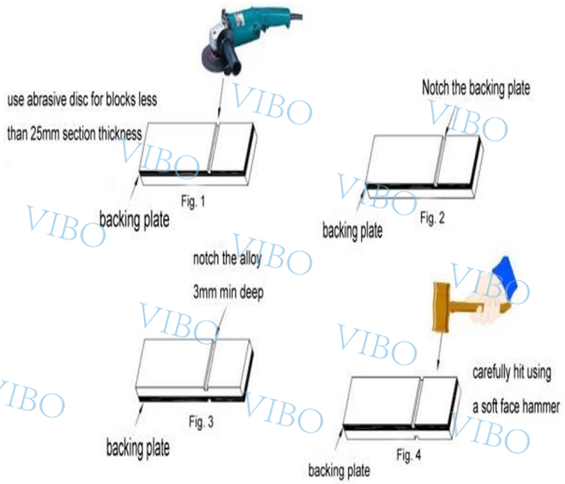

Chamfer location - Y indicates bottom side;
Bindicates both top and bottom sides.
倒角位置 - Y 表示底面;B表示顶部和底部。

# RECOMMENED CUTTING/FORMING/WELDING INSTRUCTION

## Cutting Instruction

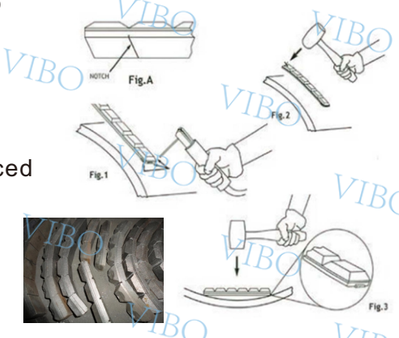
High pressure abrasive water jet cutting is the preferred cutting method. Thermal cutting using an oxyacetylene torch, arc-air or plasma is NOT recommended due to high localized heat input and high risk of cracking and delamination.

For VIBOWEAR plate less than 25mm thickness,cutting by abrasive disc is an accepted practice.(Fig 1)
CAUTION: Extreme care must be taken when cutting tominimise local pre-heating or cracks and delamination may occur.
Follow the steps below to cut wear blocks with a thickness of less than 25mm section.
1. Secure the piece to be cut in a vice or clamp
2. Notch the backing plate as shown in (Fig 2)
3. Notch the White Iron a minimum of 3mm deep opposite the notch in the backing plate, as per(Fig 3)
4.Wrap the piece with a rag and carefully hit using a soft faced hammer.
The piece should break cleanly at the notch(Fig 4)



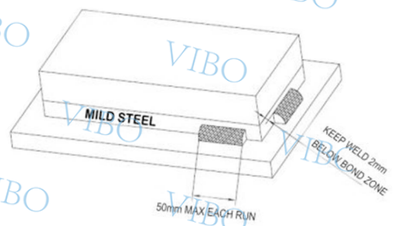

## Forming Procedure for CHOCKY BARS

For severe curves with radius of less than 305mm, or inside curves, it is advisable to notch the mild steel backing plate opposite the “V” to assist forming. It is normal the chocky bars may crack during bending.
1.Clean the surface to which chocky block will be welded
2. Tack weld one end of the chocky block (as per the welding procedure) by 15mm minimum length per weld.(Fig 1)
a.Outside curves: Hammer down the unwelded end with a soft faced hammer to bend bar to match mating radius.(Fig 2)
b. Inside curves: Starting in the centre strike bar with a soft face hammer to bend bar to match mating radius.(Fig 3)
3. Stitch weld as per the welding procedure.




## Welding Procedure

1. Ensure that the backing plate and mating metal surface is clean and flat.
2. Do not re-heat. Clamp and tack weld Wear Block into position.
3. Welding Rod selection- Low hydrogen weld rods or gas covered cored wire is recommended,Gas shielded solid MIG wire-0 1.2mm max Flux cored wire-0 1.6mm max to ASTM/AWS A5.18 classification ER705-6 Low hydrogen electrode-0 3.25mm max to ASTM/AWS A5.1 classification E7016-1H8 or E7018-1H4.
4. Stitch weld, laying 50mm maximum length on each run, alternating ends or sides to minimize heat input. Do not deposit weld within 2mm from joint line between CWI and mild backing steel.
5.Temperature must not exceed 200'C.Excessive heat input may cause cracking and delamination. Use thermal crayons to monitor temperature.
6. Do not weld continuously. Continuous weld may cause warping, delamination, and cracking.



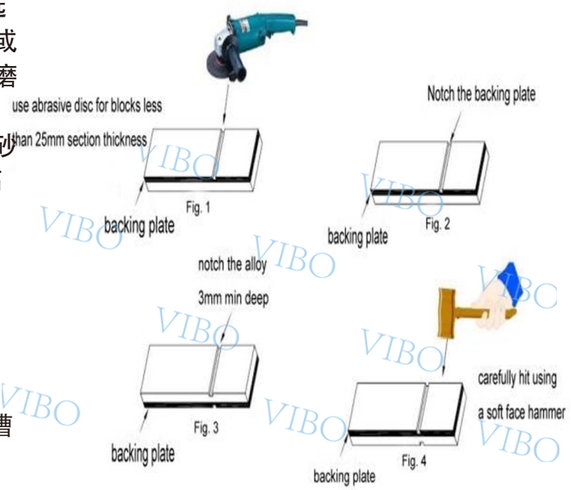

# 切割/折弯/焊接操作说明

## "双威"超级耐磨块切割方案推荐

➢ 高压水射流切割是切割"双威"超级耐磨块的首选方法，其次可以用线切割。2.不可使用氧炔、电弧或等离子进行热切割，局部高热的应力集中将导致耐磨层开裂甚至分层脱落。

➢ 对于小于25mm 截面厚度的耐磨块，可以采用砂轮切割(图1),但切割应格外小心，以尽量减少局部高热导致裂纹或者开裂。

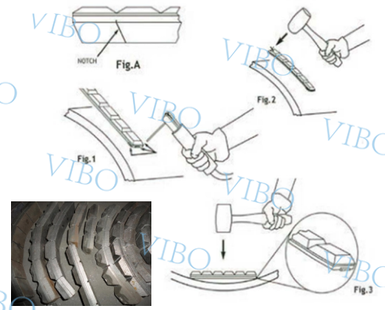
切割步骤如下：
1.将耐磨块固定在虎钳或夹子上；
2.切割背板，如图2所示；
3.在背板凹槽对面切割白铁片至少3mm，如图3所示；
4.用抹布仔细打包，用软面锤敲打，耐磨块会在开槽处断开。




## "双威"超级耐磨块弯曲方案推荐

此案例仅适用于背板开槽如巧克力式耐磨块

对于半径小于305mm 的弯曲和内弯，建议选用带"V" 槽基板。耐磨块在弯曲过程中可能会开裂，这是正常现象，不影响使用。折弯步骤如下：
1.清洁被焊接面的表面；
2.先点焊或者段焊巧克力耐磨块的一端，最小段焊长度15mm。
a.外弯：用软面锤锤击未焊接的端部到匹配半径。
b.内弯：在耐磨块的中心位置上用软面锤敲击到匹配半径。
3.根据焊接程序继续缝合焊缝。




## "双威"超级耐磨块焊接方案推荐

建议在焊接/折弯/切割/安装耐磨块的过程中始终使用软面锤和佩戴ANSI认证(Z87.1)的眼镜。耐磨块在焊接安装之前要确保待焊面的表面平整和清洁。采用断续焊的方式(不能连续焊)焊接安装耐磨块。断续焊（如下图所示）：在每个焊道上每次的焊接长度最大为50mm,以减少焊接温升对耐磨块产生的应力集中影响；因为白口铸铁的线膨胀系数很小，碳含量高，焊接产生的局部应力集中容易导致铸件开裂，所以一定要使用断续焊(一段段焊或者点焊)。焊道与铸件的距离最少保证有2mm。连续焊可能会导致耐磨块翘曲，脱层和开裂。可使用热蜡笔检查耐磨块温度，一般允许快速升温最高到200℃。

➢ 如果产品的四边都需要焊，请务必断续焊，以避免拘束力太大导致的开裂。(实际上焊接产品的两个对边已经能保证产品的安装焊接强度)

➢ 焊丝建议-使用低氢焊条(抗裂性好)或气体包芯焊丝(不要使用酸性焊条)；气体保护MIG焊丝-最大直径1.2mm；药芯焊丝-直径最大1.6mm；ASTM/AWS A5.18类；ER705-6低氢焊条-直径最大为3.25mm；ASTM/AWS A5.1类E7016-1H8或E7018-1H4。

