

HENGPU (NINGBO)LASER TECHNOLOGY CO.,LTD

www.hengpulaser.com



HENGPU
LASER

METAL / CERAMIC 3D PRINTING EXPERT



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ABOUT HENGPU LASER



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Hengpu Laser is a High-tech company founded **in 2013** by the **Doctor team** studied **in the United States**. The company is committed to the technology promotion and industrialization of industrial laser **3D printing**. It is the leader and **pioneer** in the field of civil 3D printing in China, and is in the international leading level in the field of 3D printing of large parts and special ceramics.

With the **"FREEFORM"** ceramic 3d printing technology, **"SUPERHARD"** and **"SUPERWEAR"** technologies developed by our company, we have has broken through the bottleneck of conventional tool manufacturing. Our 3D printing brand "Hengpu pick" has become a leading brand in the field of engineering tools. We have successfully developed **more than 30 products** in the fields of **mining, subway tunnel, oil exploration and road & bridge infrastructure**, breaking the monopoly of international tool tycoons in the field of engineering tools in China.

Hengpu laser is the (Chinese) national High-tech enterprise, and have gotten the quality management system certification (**ISO9001:2008**) and military product quality management system certification (**GJB9004B-2009**). There are two subsidiaries, namely Hengpu (Ningbo) Laser Technology Co., Ltd and Harbin Hengpu Laser Application Technology Co., Ltd.

Our company has mastered a number of core technologies, and is authorized more than 10 invention patents, We has won the first prize in the **Global New Materials Industry Competition**, the National Innovation and Entrepreneurship Competition excellence award, Hurun Rich List of China's most investment value nova Heilongjiang Top 10 and other Honours. Since the establishment, We have obtained several rounds of investment from famous investment institutions such as Orize Holdings, FD Ventures and Lilac Ventures.

Hengpu Laser adheres to the concept of scientific and technological innovation.



**METAL / CERAMIC 3D
PRINTING EXPERT**

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MORE THAN 10 TIMES HIGHER IN WEAR RESISTANCE

The **3D printing** of more than **ten kinds of ceramics** (e.g., Al_2O_3 , ZrO_2 , SiC , WC , CBN , etc.) has been realized.

Wear resistance is more than **10 times higher** than that of metal.

PAVEMENT



Application: Construction of **subway, tunnel** and other **infrastructures**; extraction of **oil, coal, natural gas and mines**.

MILLING MACHINE SERIES

Put forward the **New concept of structural and functional integration**. Transformation of military technology to civilian use, new breakthrough in the field of tool manufacturing.

NEW CONCEPTS

NEW TECHNOLOGIES

NEW PRODUCTS



- The world's most **advanced coarse-grained tungsten carbide alloy**

- Micro-aging dispersion strengthening design

- Significantly **improved service life** compared to conventional alloys.

- Hengpu's "**FREEFORM**" **3D printing technology**, together with the super wear-resistant materials greatly prolong the alloy life.

- Hengpu adopted **bionic structure "3D-B&F" technology** with the self-adaption function to prevent eccentric wear.

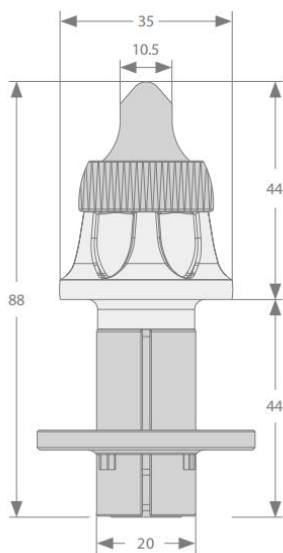
- Military grade **high purity matrix material**

- "**QUENCHING AND TEMPERING**" special heat treatment process, has excellent comprehensive properties of high hardness and high toughness

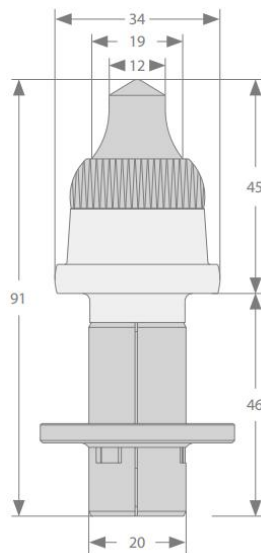
- High resistance to wear and fracture.



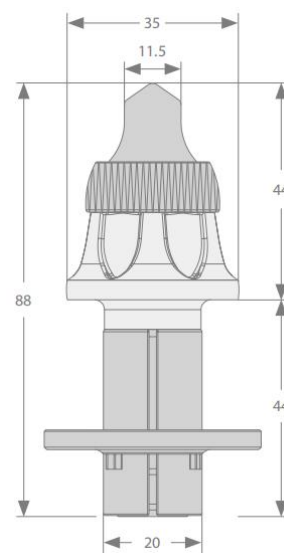
HP20T2



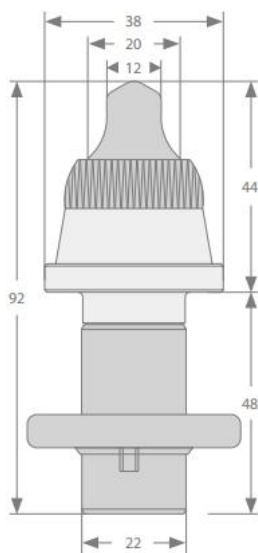
HP20T2D



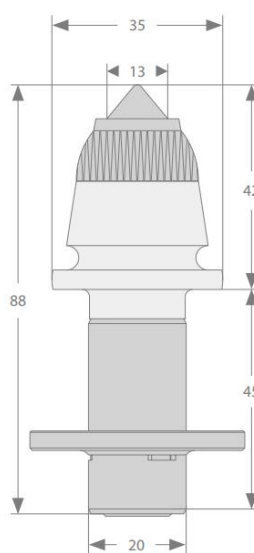
HP20T2S



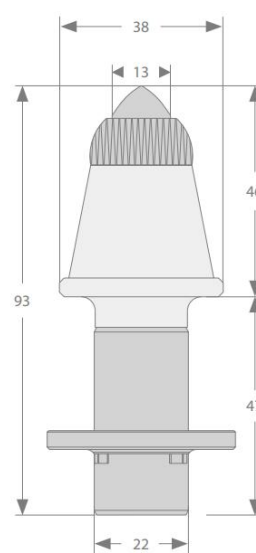
HP22T2



HPSN20-13D



HPSN22-13D



Model	Packaging Method	Number of Packages	Weight/Box	Whole Pallet Box	Whole Pallet Weight
HP20T2	Box	50	16.63KG	60 Box	997.8KG
HP20T2D	Box	50	16.63KG	60 Box	997.8KG
HP20T2S	Box	50	15.8KG	60 Box	948KG
HP22T2	Box	40	16.3KG	60 Box	978KG
HPSN20-13D	Box	50	15.9KG	60 Box	954KG
HPSN22-13D	Box	50	15.9KG	60 Box	954KG

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MORE THAN 10 TIMES HIGHER IN WEAR RESISTANCE

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Wear resistance is more than **10 times higher** than that of metal.

COAL MINING



Application: Construction of **subway, tunnel** and other **infrastructures**; extraction of **oil, coal, natural gas** and **mines**.

COAL PICK SERIES

Overcome technological barrier of **ultrafast solidification in 3d printing**, which leads to **higher crystal growth rate** and finer internal structure without defects.

NEW TECHNOLOGIES

NEW PROCESSES

NEW PRODUCTS



- The world's most **advanced coarse-grained tungsten carbide alloy**

- Micro-aging dispersion strengthening design

- Significantly **improved service life** compared to conventional alloys.

- Hengpu's "**FREEFORM**" **3D printing technology**, together with the super wear-resistant materials greatly prolong the alloy life.

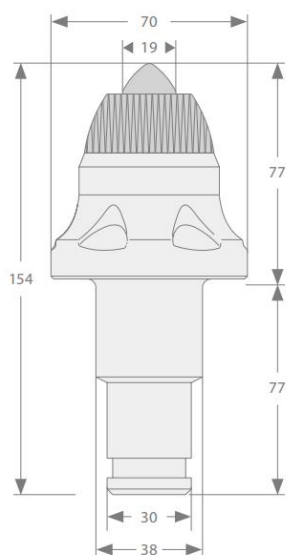
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- Military grade **high purity matrix material**

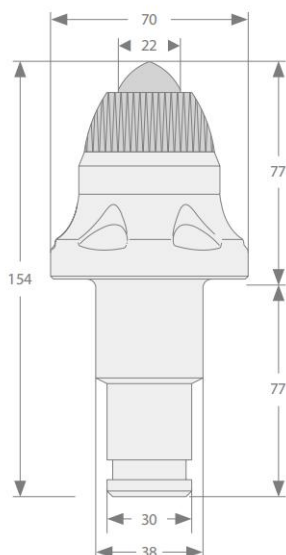
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- High resistance to wear and fracture.

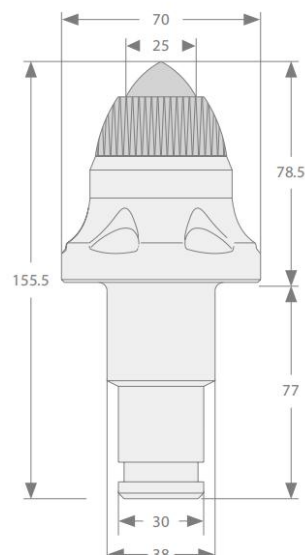
HPU47-19TD



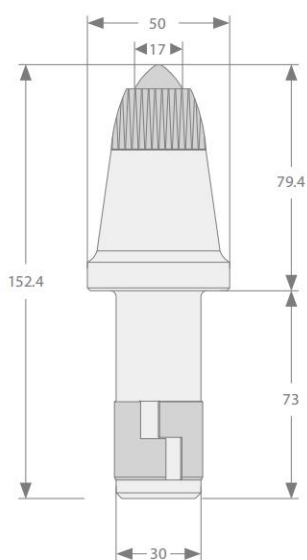
HPU47-22TD



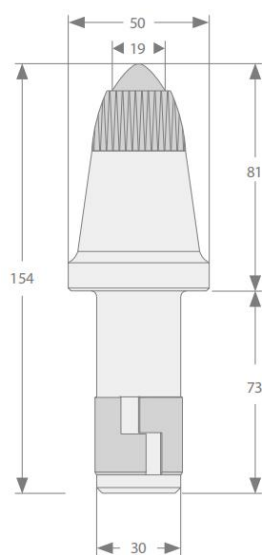
HPU47-25TD



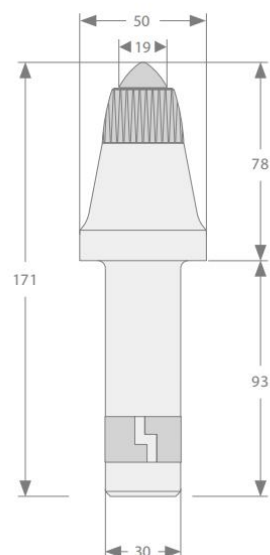
HPU82-17TD



HPU82-19TD



HPU82-19TD
EXTENDED



Model	Packaging Method	Number of Packages	Weight/Box	Whole Pallet Box	Whole Pallet Weight
HPU47-19TD	Box	10	16KG	60 Box	960KG
HPU47-22TD	Box	10	16.7KG	60 Box	1002KG
HPU47-25TD	Box	10	19KG	60 Box	1140KG
HPU82-17TD	Box	20	21KG	60 Box	1260KG
HPU82-19TD	Box	20	21KG	60 Box	1260KG
HPU82-19TD extended	Box	20	22.4KG	60 Box	1344KG

COAL PICK SERIES

Make Breakthrough in the control process of **high-temperature active 3d melt compositions** and achieve an ultra-purified metallurgical control, which leads to a **high material purity**.

NEW TECHNOLOGY

HIGH PURITY

HIGH PERFORMANCE



- The world's most **advanced coarse-grained tungsten carbide alloy**

- Micro-aging dispersion strengthening design

- Significantly **improved service life** compared to conventional alloys.

- Hengpu's "**FREEFORM**" **3D printing technology**, together with the super wear-resistant materials greatly prolong the alloy life.

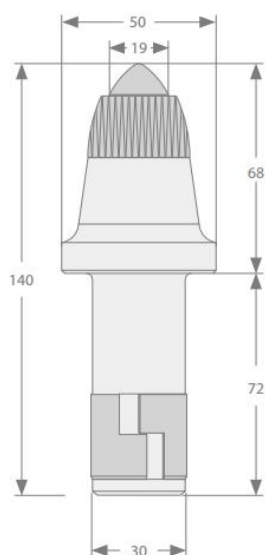
- Hengpu adopted **bionic structure "3D-B&F" technology** with the self-adaption function to prevent eccentric wear.

- Military grade **high purity matrix material**

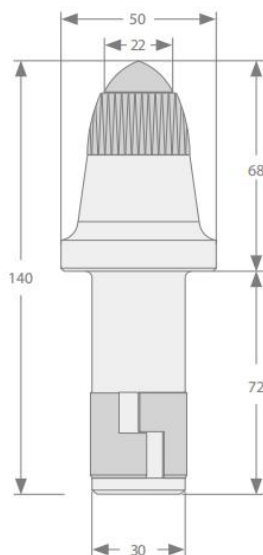
- "**QUENCHING AND TEMPERING**" special heat treatment process, has excellent comprehensive properties of high hardness and high toughness

- High resistance to wear and fracture.

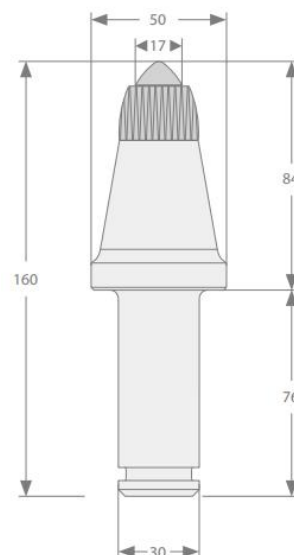
HPU84-19TD



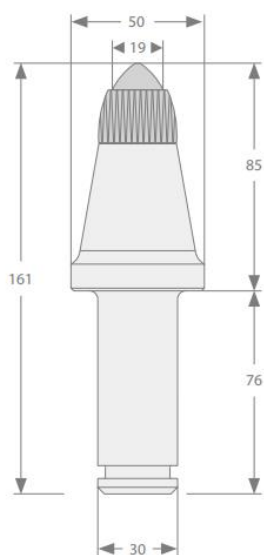
HPU84-22TD



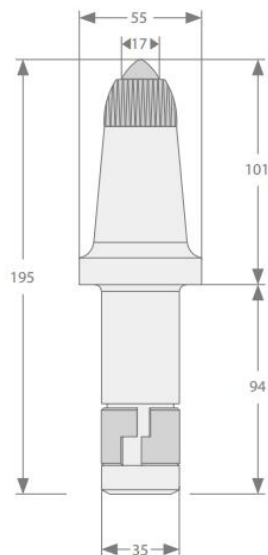
HPU85-17TD



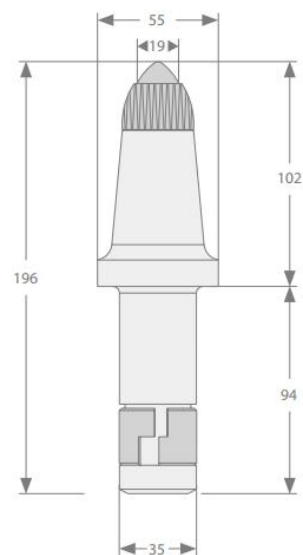
HPU85-19TD



HPU92-17TD



HPU92-19TD



Model	Packaging Method	Number of Packages	Weight/Box	Whole Pallet Box	Whole Pallet Weight
HPU84-19TD	Box	20	19KG	60 Box	1140KG
HPU84-22TD	Box	20	19.4KG		1164KG
HPU85-17TD	Box	20	23.3KG		1398KG
HPU85-19TD	Box	20	22KG		1320KG
HPU92-17TD	Box	15	24.3KG	60 Box	1458KG
HPU92-19TD	Box	15	25KG		1500KG

COAL PICK SERIES

Make Breakthrough in the control process of **high-temperature active 3d melt compositions** and achieve an ultra-purified metallurgical control, which leads to a **high material purity**.

NEW TECHNOLOGY

HIGH PURITY

HIGH PERFORMANCE



- The world's most **advanced coarse-grained tungsten carbide alloy**

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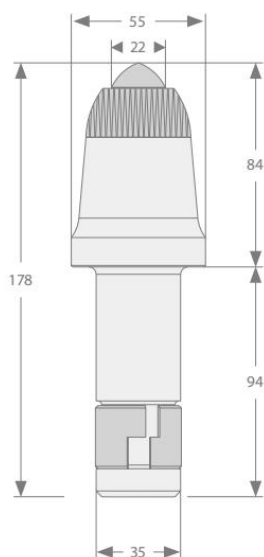
- Military grade **high purity matrix material**

- "**QUENCHING AND TEMPERING**" special heat treatment process, has excellent comprehensive properties of high hardness and high toughness

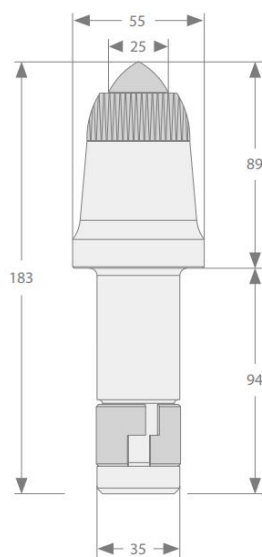
- High resistance to wear and fracture.

恒普 截齿

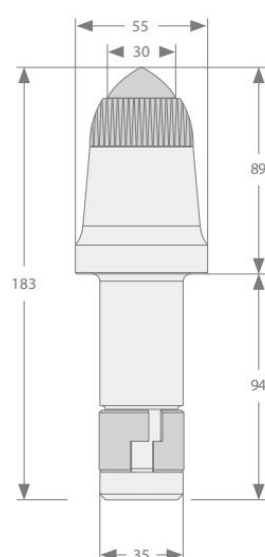
HPU95-22TD



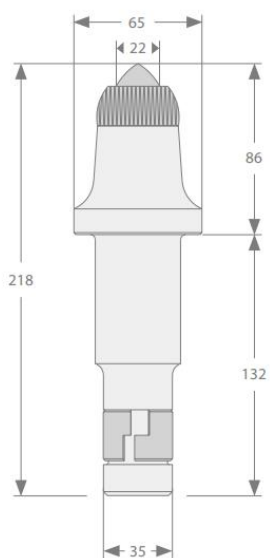
HPU95-25TD



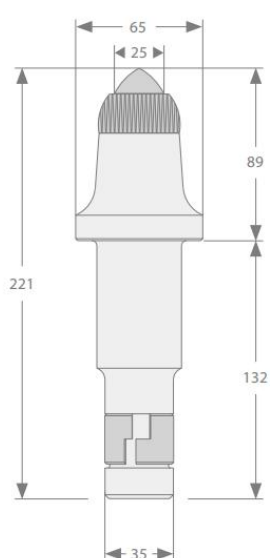
HPU95-30TD



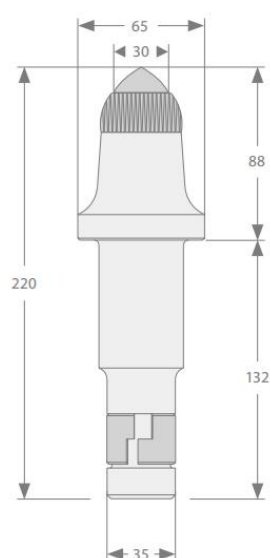
HPU170-22TD



HPU170-25TD



HPU170-30TD



Model	Packaging Method	Number of Packages	Weight/Box	Whole Pallet Box	Whole Pallet Weight
HPU95-22TD	Box	15	25KG	60 Box	1500KG
HPU95-25TD	Box	15	25.5KG	60 Box	1530KG
HPU95-30TD	Box	15	28.3KG	60 Box	1698KG
HPU170-22TD	Box	10	23.4KG	60 Box	1404KG
HPU170-25TD	Box	10	24.4KG	60 Box	1464KG
HPU170-30TD	Box	10	26KG	60 Box	1560KG

ROADHEADER SERIES

Proposal of **bionic 3D structure** with **adaptive rotation function**, which leads to a more uniform tool wear and a **superior design life**.

NEW STRUCTURE

HIGH EFFICIENCY

HIGH YIELD



- The world's most **advanced coarse-grained tungsten carbide alloy**

- Micro-aging dispersion strengthening design

- Significantly **improved service life** compared to conventional alloys.

- Hengpu's "**FREEFORM**" **3D printing technology**, together with the super wear-resistant materials greatly prolong the alloy life.

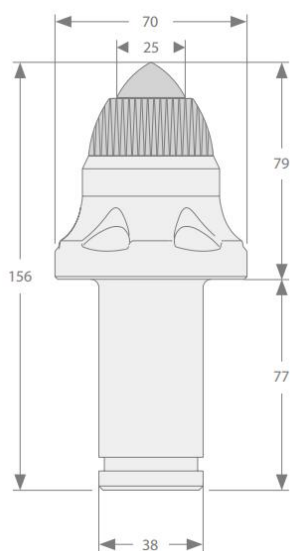
- Hengpu adopted **bionic structure "3D-B&F" technology** with the self-adaption function to prevent eccentric wear.

- Military grade **high purity matrix material**

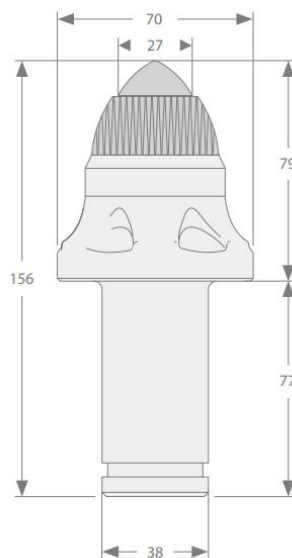
- "**QUENCHING AND TEMPERING**" special heat treatment process, has excellent comprehensive properties of high hardness and high toughness

- High resistance to wear and fracture.

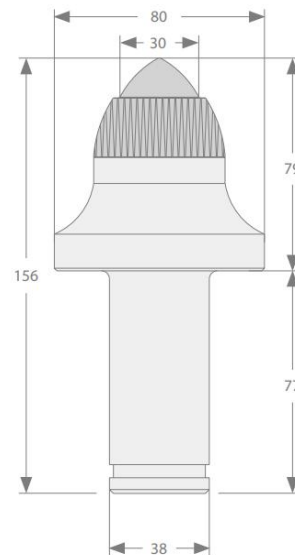
HPS135D-25TD



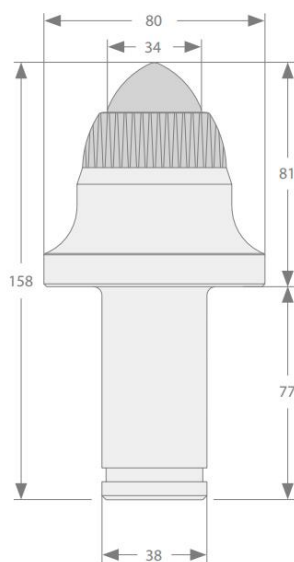
HPS135D-27TD



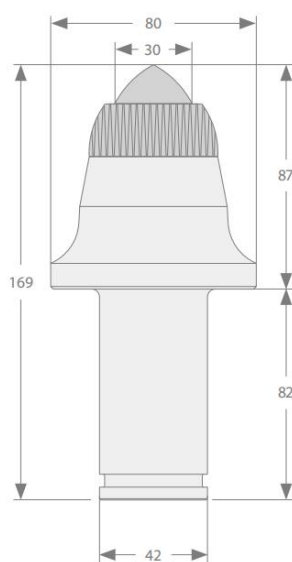
HPS260-30TD



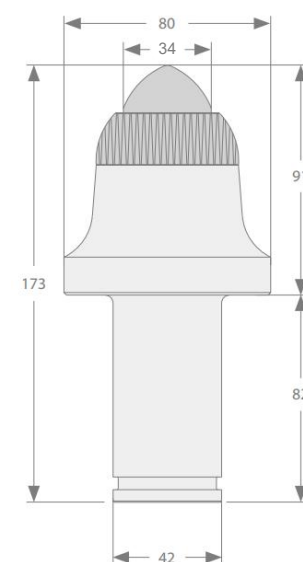
HPS260-34TD



HPS360-30TD



HPS360-34TD



Model	Packaging Method	Number of Packages	Weight/Box	Whole Pallet Box	Whole Pallet Weight
HPS135D-25TD	Box	10	19.5KG	60 Box	1170KG
HPS135D-27TD	Box	10	20KG	60 Box	1200KG
HPS260-30TD	Box	10	23KG	60 Box	1380KG
HPS260-34TD	Box	10	25.6KG	60 Box	1536KG
HPS360-30TD	Box	10	26KG	60 Box	1560KG
HPS360-34TD	Box	8	23.75KG	60 Box	1425KG

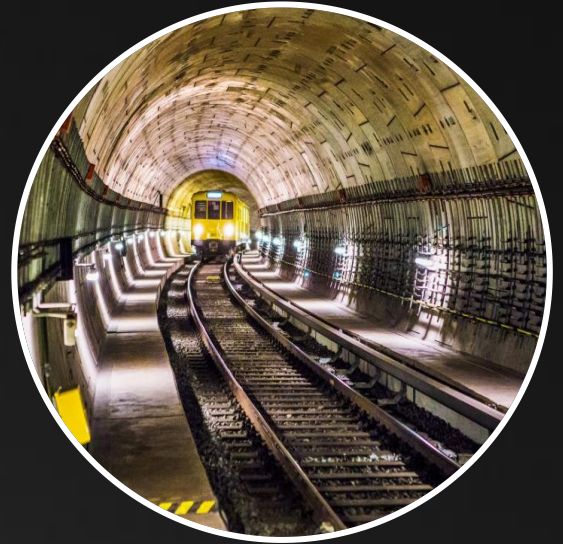


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INTEGRATION OF STRUCTURE AND FUNCTION

SUBWAY

Structural and functional integrated
3D printing ceramics: Good steel is
used on the blade.



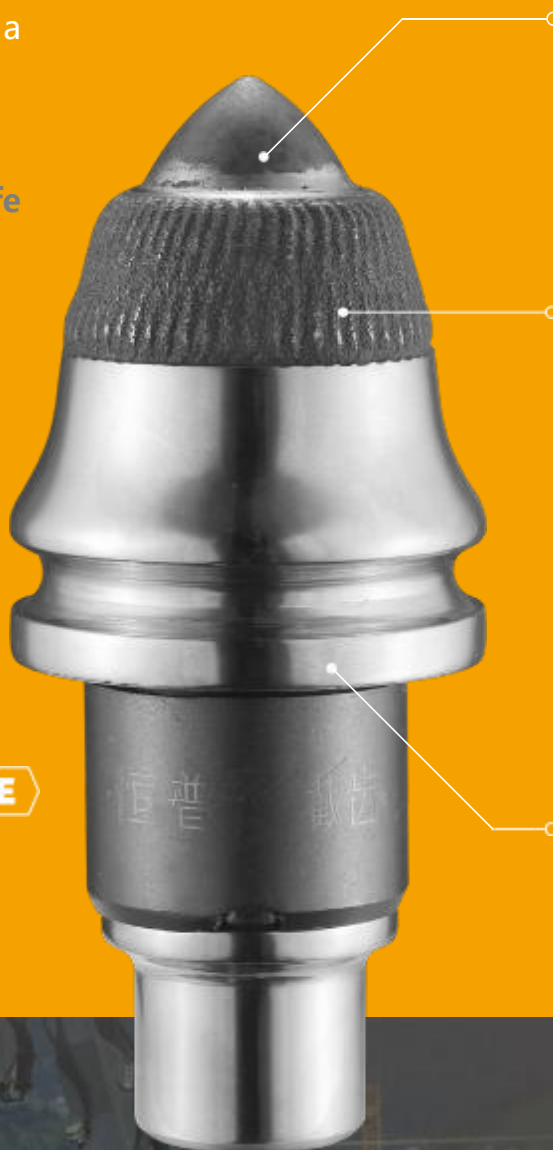
ROTARY EXCAVATION SERIES

Breakthrough in **metal-ceramic atomic bonding technology**, a perfect combination of high hardness and high toughness, more than **10 times longer life** than conventional materials.

NEW MATERIALS

HIGH WEAR RESISTANCE

LONG SERVICE LIFE



- The world's most **advanced coarse-grained tungsten carbide alloy**

- Micro-aging dispersion strengthening design

- Significantly **improved service life** compared to conventional alloys.

- Hengpu's "**FREEFORM**" **3D printing technology**, together with the super wear-resistant materials greatly prolong the alloy life.

- Hengpu adopted **bionic structure "3D-B&F" technology** with the self-adaption function to prevent eccentric wear.

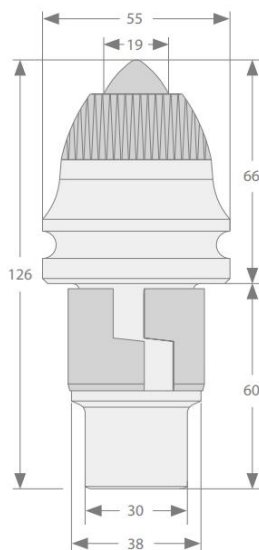
- Military grade **high purity matrix material**

- "**QUENCHING AND TEMPERING**" special heat treatment process, has excellent comprehensive properties of high hardness and high toughness

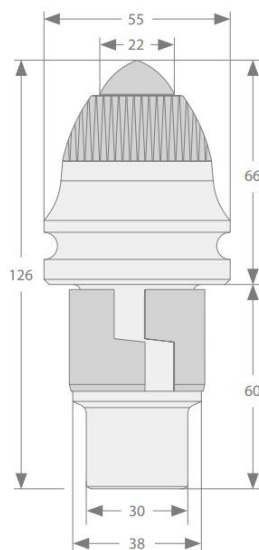
- High resistance to wear and fracture.



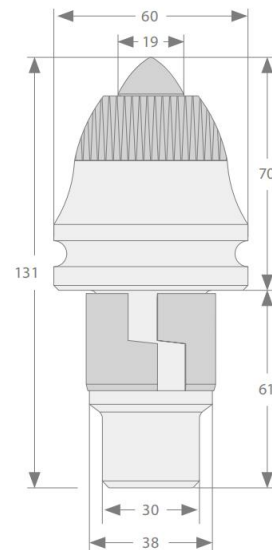
HP3055-19TD



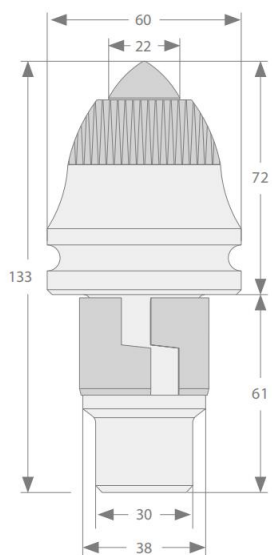
HP3055-22TD



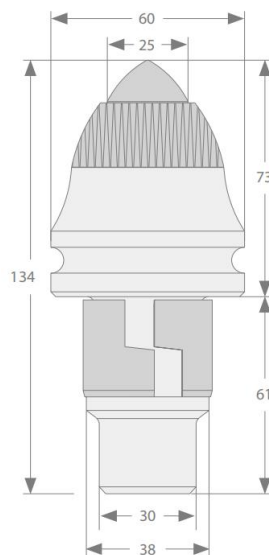
HP3060-19TD



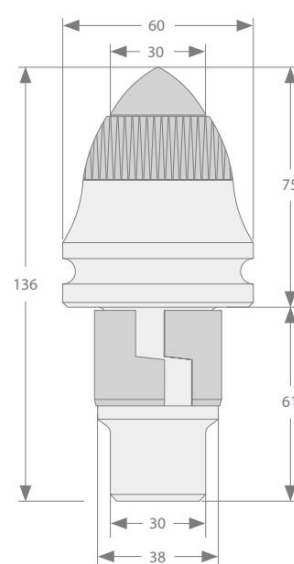
HP3060-22TD



HP3060-25TD



HP3060-30TD



Model	Packaging Method	Number of Packages	Weight/Box	Whole Pallet Box	Whole Pallet Weight
HP3055-19TD	Box	15	18.6KG	60 Box	1116KG
HP3055-22TD	Box	15	19KG	60 Box	1140KG
HP3060-19TD	Box	15	21.25KG	60 Box	1275KG
HP3060-22TD	Box	15	21.3KG	60 Box	1278KG
HP3060-25TD	Box	15	22.3KG	60 Box	1338KG
HP3060-30TD	Box	15	24.2KG	60 Box	1452KG

MILLING EXCAVATOR SERIES

Military product standards,
strict material selection, rigorous
production process and **strict**
quality inspection.

HIGH STANDARD

HIGH TECHNOLOGY

HIGH QUALITY



- The world's most **advanced coarse-grained tungsten carbide alloy**

- Micro-aging dispersion strengthening design

- Significantly **improved service life** compared to conventional alloys.

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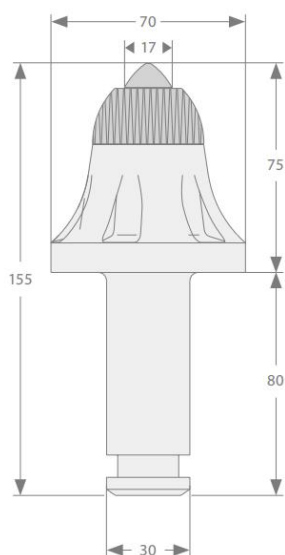
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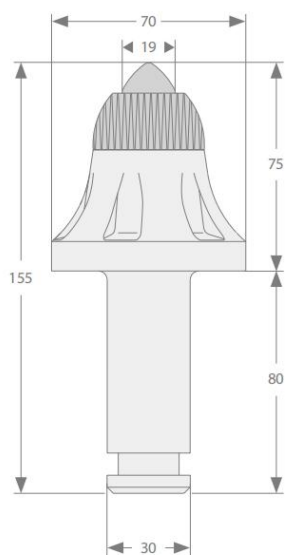
- High resistance to wear and fracture.



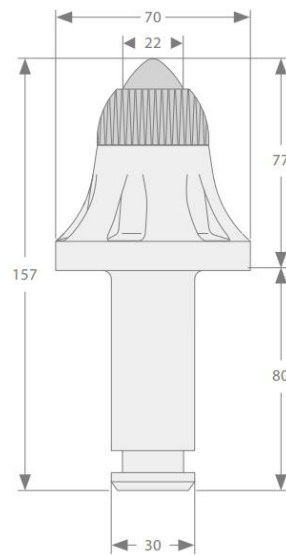
HPS120B-17TD



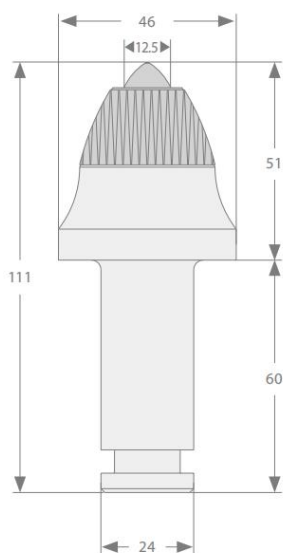
HPS120B-19TD



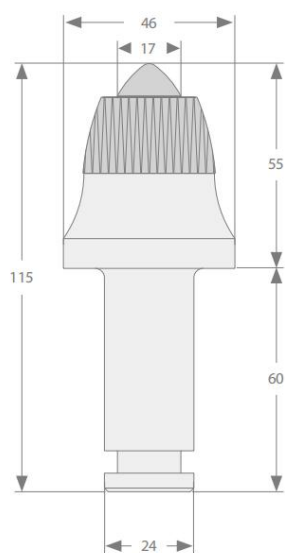
HPS120B-22TD



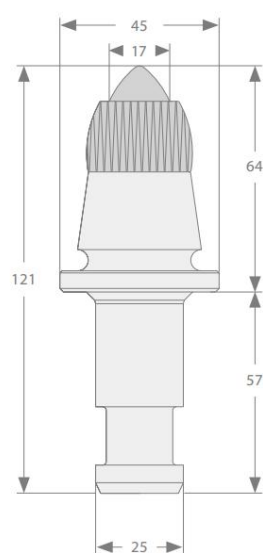
HPXW24B-13TD



HPXW24B-17TD



HPC31-17TD



Model	Packaging Method	Number of Packages	Weight/Box	Whole Pallet Box	Whole Pallet Weight
HPS120B-17TD	Box	15	21.3KG	60 Box	1278KG
HPS120B-19TD	Box	15	22.8KG	60 Box	1368KG
HPS120B-22TD	Box	15	23KG	60 Box	1380KG
HPXW24B-13TD	Box	40	22.4KG	60 Box	1344KG
HPXW24B-17TD	Box	40	25KG	60 Box	1500KG
HPC31-17TD	Box	40	22.8KG	60 Box	1368KG

CATEGORY	MODEL	ALLOY TYPE			FEATURES OF TOOTH HEAD	CUTTING CONDITIONS					CIRCLIP			HANDLE	
		COLUMN	MUSHROOM	HAT		SOFT	MEDIUM HARD	HARD	HIGHER HARD	EXTREMELY HARD	JUMP RING	SNAP RING	RETAINING RING	DIAMETER	LENGTH
MILLING MACHINE SERIES	HP20T2	●			WEAR RESISTANT WITHOUT SPARK		●				●			20mm	88mm
	HP20T2D	●						●			●			20mm	91mm
	HP20T2S	●							●		●			20mm	88mm
	HP22T2	●						●			●			22mm	92mm
	HPSN20-13D	●						●			●			20mm	88mm
	HPSN22-13D	●						●			●			22mm	93mm
COAL PICK SERIES	HPU47-19TD	●			WEAR RESISTANT WITHOUT SPARK		●						●	30mm	154mm
	HPU47-22TD	●						●					●	30mm	154mm
	HPU47-25TD	●							●				●	30mm	155.5mm
	HPU82-17TD	●					●				●			30mm	152.4mm
	HPU82-19TD	●					●				●			30mm	154mm
	HPU82-19TD EXTENDED	●					●				●			30mm	171mm
	HPU84-19TD	●					●				●			30mm	140mm
	HPU84-22TD	●					●				●			30mm	140mm
	HPU85-17TD	●					●						●	30mm	160mm
	HPU85-19TD	●					●						●	30mm	161mm
	HPU92-17TD	●					●				●			35mm	195mm
	HPU92-19TD	●					●				●			35mm	196mm
	HPU95-22TD	●					●				●			35mm	178mm
	HPU95-25TD	●						●			●			35mm	180mm
	HPU95-30TD	●								●	●			35mm	180mm
	HPU170-22TD	●						●			●			35mm	218mm
	HPU170-25TD	●							●		●			35mm	220mm
	HPU170-30TD	●								●	●			35mm	220mm

CATEGORY	MODEL	ALLOY TYPE			FEATURES OF TOOTH HEAD	CUTTING CONDITIONS					CIRCLIP			HANDLE	
		COLUMN	MUSHROOM	HAT		SOFT	MEDIUM HARD	HARD	HIGHER HARD	EXTREMELY HARD	JUMP RING	SNAP RING	RETAINING RING	DIAMETER	LENGTH
ROADHEADER SERIES	HPS135D-25TD	●			WEAR RESISTANT WITHOUT SPARK				●				●	38mm	156mm
	HPS135D-27TD	●							●				●	38mm	156mm
	HPS260-30TD	●								●			●	38mm	156mm
	HPS260-34TD	●								●			●	38mm	158mm
	HPU360-30TD	●								●			●	42mm	169mm
	HPU360-34TD	●								●			●	42mm	173mm
MILLING EXCAVATOR SERIES	HPS120B-17TD	●			WEAR RESISTANT		●						●	30mm	155mm
	HPS120B-19TD	●						●					●	30mm	155mm
	HPS120B-22TD	●						●					●	30mm	157mm
	HPXW24B-13TD	●					●						●	24mm	111mm
	HPXW24B-17TD	●						●					●	24mm	115mm
	HPC31-17TD	●						●					●	25mm	121mm

CATEGORY	MODEL	ALLOY TYPE			FEATURES OF TOOTH HEAD	CUTTING CONDITIONS					CIRCLIP			HANDLE	
		COLUMN	MUSHROOM	HAT							JUMP RING	SNAP RING	RETAINING RING	DIAMETER	LENGTH
ROTARY EXCAVATION SERIES	HP3055-19TD	●			WEAR RESISTANT	0-50 MPa					●			30mm	126mm
	HP3055-22TD					50-100 MPa					●			30mm	126mm
	HP3060-19TD	●				0-50 MPa					●			30mm	131mm
	HP3060-22TD	●				50-100 MPa					●			30mm	133mm
	HP3060-25TD	●				100-150 MPa					●			30mm	134mm
	HP3060-30TD	●				> 150 MPa					●			30mm	136mm



**HENGPU (NINGBO)LASER
TECHNOLOGY CO.,LTD**
WE WELCOME YOUR INQUIRIES



ADD: No. 96, Hibiscus Road, High tech Zone, Ningbo, Zhejiang

EMAIL: sales3@hengpulaser.cn

WEB: www.hengpulaser.com

TEL: +86-15397210819