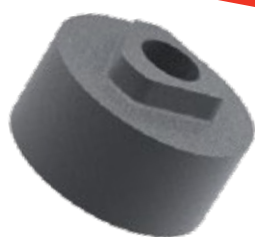
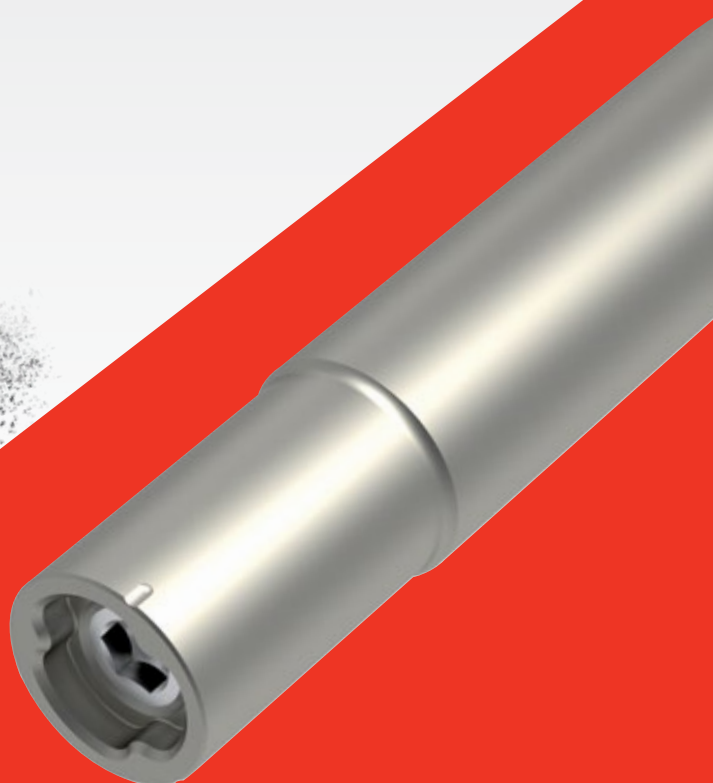


p-line Innovative Exchangeable Head System





Your pioneering partner for carbide solutions. Driven by innovative excellence, the CERATIZIT Group offers the world's most comprehensive carbide solutions for tool manufacturers aiming to attain the decisive competitive edge.

CERATIZIT Group

For over 100 years, CERATIZIT has been a pioneer in developing exceptional hard material solutions for cutting tools and wear protection. The privately owned company, based in Mamer, Luxembourg, develops and manufactures highly specialised carbide cutting tools, indexable inserts and rods made of hard materials as well as wear parts.


The CERATIZIT Group is the global market leader in several wear part application areas, and successfully develops new types of cemented carbide, cermet and ceramic grades which are used for instance in the wood, metal and stone working industries.

Facts & figures

 **Headquarters**
Mamer, **Luxembourg**

 **25** more than
production sites


 **7 000** more than
employees

 **80** more than
countries in which we are active

 **1 00 000** more than
products

 **1 000** more than
patents & utility models

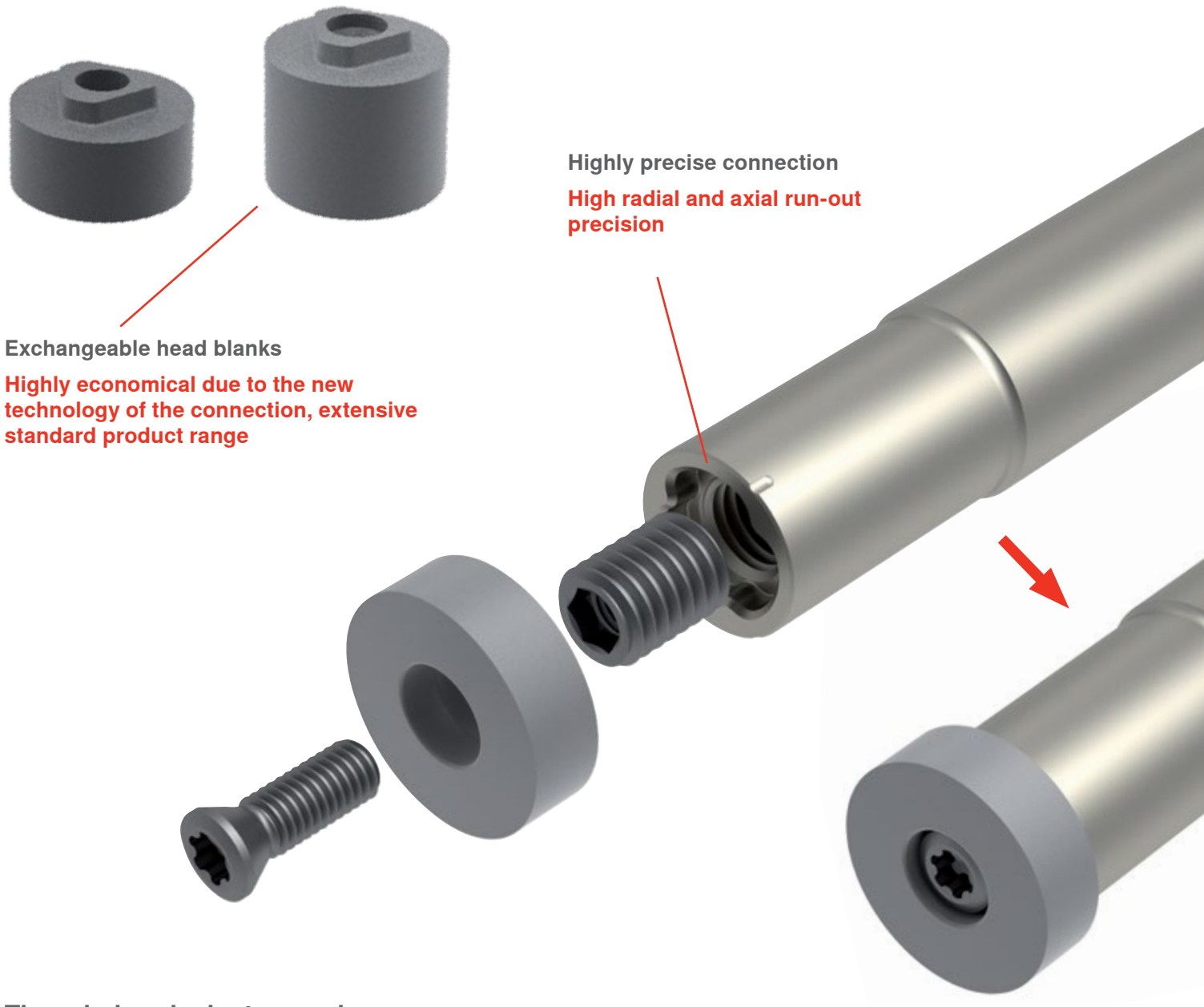
 **2 00** more than
R&D employees

 **35** % of products
developed in the last 5 years

 **15** more than
innovation awards

Exchangeable Head System – Innovative solution for your application

A unique and extremely innovative exchangeable head system is now available from CERATIZIT. The newly developed EHS system is characterised by maximum efficiency and economy in terms of the tool connection.



Exchangeable head blanks

Highly economical due to the new technology of the connection, extensive standard product range

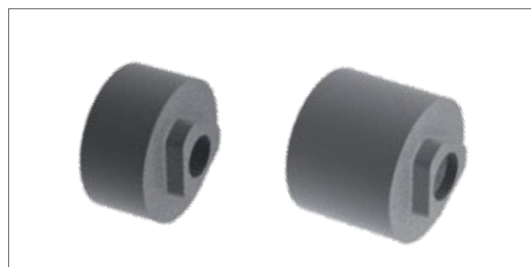
Highly precise connection

High radial and axial run-out precision

Threaded-end adapters and shanks

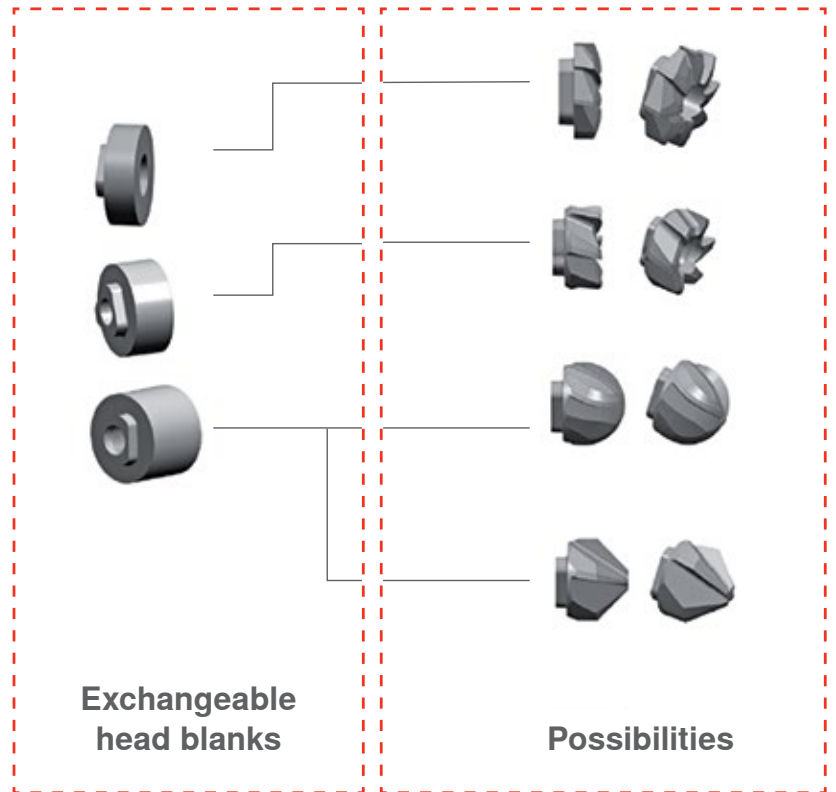


Blanks



From the blank to the exchangeable head tool

The standard range includes four diameters in three versions each, thus offering you virtually unlimited possibilities.

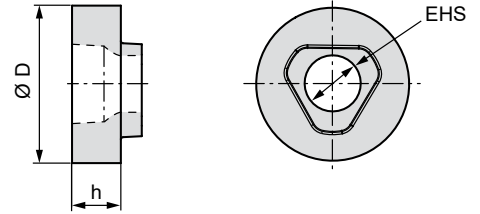
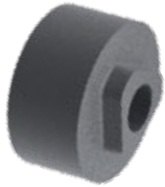


The advantages of the innovative technology of the connection include:

- ▲ **Precision**
High radial and axial run-out precision
- ▲ **Stability and process security**
Short and stable connection with location face
- ▲ **Attractive price-performance ratio**
Highly economical thanks to the new technology of the tool connection
Resource-efficient thanks to smaller quantity of cemented carbide in the connection area
- ▲ **Universal application**
Thanks to the threaded-end adapters, it is possible to use the system with all threaded-end shanks commonly available on the market.

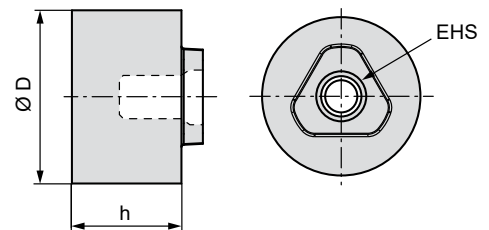
Product range – blanks

As sintered – for applications without cutting edge in the centre



D [mm]	h [mm]	Type, description	CTS20D	EHS size
13.3	4.2	EHS12.E13,3-4,2	●	12
13.3	6.2	EHS12.E13,3-6,2	●	12
18.6	5.7	EHS16.E18,6-5,7	●	16
18.6	8.2	EHS16.E18,6-8,2	●	16
22.6	6.7	EHS20.E22,6-6,7	●	20
22.6	9.2	EHS20.E22,6-9,2	●	20
26	7.2	EHS25.E26-7,2	●	25
26	10.2	EHS25.E26-10,2	●	25

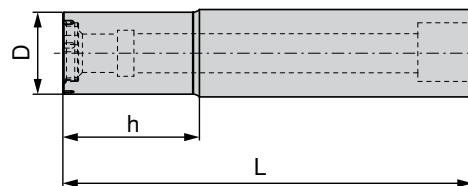
As sintered – for applications with cutting edge in the centre



D [mm]	h [mm]	Type, description	CTS20D	EHS size
13.3	9.2	EHS12.B13,3-9,2	●	12
18.6	13.7	EHS16.B18,6-13,7	●	16
22.6	16.7	EHS20.B22,6-16,7	●	20
26	19.2	EHS25.B26-19,2	●	25

Product range – shanks and spare parts

Shank – shank for grinding

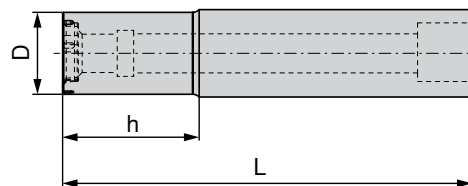


D [mm]	h [mm]	L [mm]	Type, description	EHS size
11	20	66	EHS12-A-A12-20-MFR	12
15	25	75	EHS16-A-A16-25-MFR	16
19	25	77	EHS20-A-A20-25-MFR	20
24	30	87	EHS25-A-A25-30-MFR	25

EHS
Size

14584515	14584516	14584517	12
14584518	14584520	14584523	16
14584518	14584520	14584523	20
14584524	14584525	14584527	25

Shank – standard shank



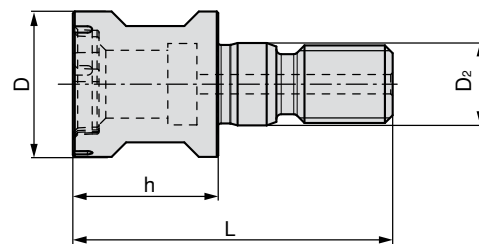
D [mm]	h [mm]	L ₂ [mm]	Type, description	EHS size
11	20	66	EHS12-A-A12-20	12
15	25	75	EHS16-A-A16-25	16
19	25	77	EHS20-A-A20-25	20
24	30	87	EHS25-A-A25-30	25

EHS
size

14584515	14584516	14584517	12
14584518	14584520	14584523	16
14584518	14584520	14584523	20
14584524	14584525	14584527	25

Product range – shanks and spare parts

Adapter with threaded end – type A

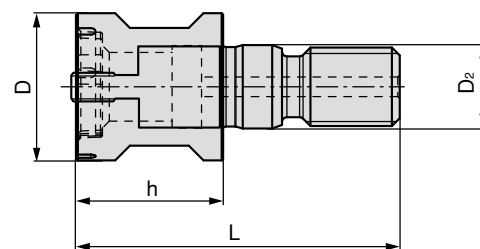


D ₁ [mm]	D ₂ [mm]	h [mm]	L [mm]	Type, description	EHS size
11	6.5	13	28	EHS12-A-G12-A	12
15	8.5	14	33	EHS16-A-G16-A	16
19	10.5	18	37	EHS20-A-G20-A	20
24	12.5	20	42	EHS25-A-G25-A	25



			EHS size
14584515		14584517	12
14584518		14584523	16
14584518		14584523	20
14584524		14584527	25

Adapter with threaded end – type B (set)



D ₁ [mm]	D ₂ [mm]	h [mm]	L [mm]	Type, description	EHS size
11	6.5	13	28	EHS12-A-G12-B	12
15	8.5	14	33	EHS16-A-G16-B	16
19	10.5	18	37	EHS20-A-G20-B	20
24	12.5	20	42	EHS25-A-G25-B	25

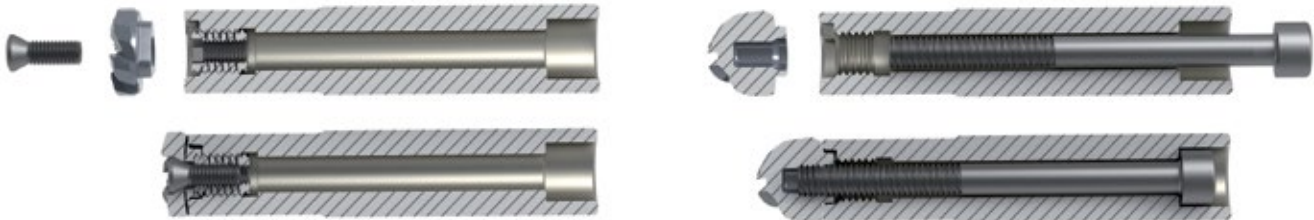


			EHS size
14570428		14570445	12
14570434		14570450	16
14570437		14570453	20
14570440		14570455	25

Application recommendation

Assembly

Assembly instructions for cylinder shanks

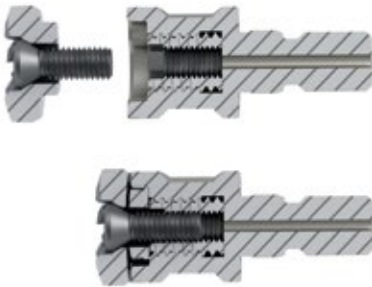


Cylinder shanks are suitable for universal application. This means that blanks with a through-hole are fixed by means of a threaded bush and a clamping screw from the front.

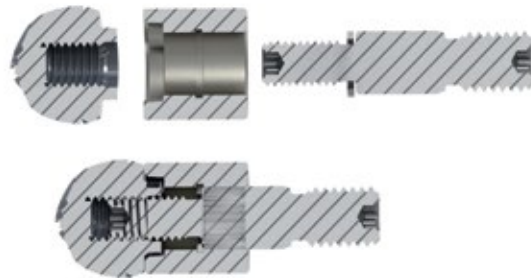
Blanks with an internal thread are fixed from behind using a cylinder screw. For this type of blanks, the threaded bush has to be eliminated.

Assembly instructions for threaded-end adapters

Type A



Type B



Threaded-end adapters are also used in threaded-end shanks which are commonly available on the market and also for extensions in cemented carbide. As there are different types of blanks, two types of adapters are required.

The threaded-end adapter, type A, is used for blanks with a through-hole. These blanks are clamped from the front using a threaded bush and a clamping screw.

The threaded-end adapter, type B, is suitable for blanks with internal thread. This adapter consists of two parts. The blank is clamped in the seat by means of the screw. Subsequently, the assembled adapter including the blank is fixed in an threaded-end adapter.

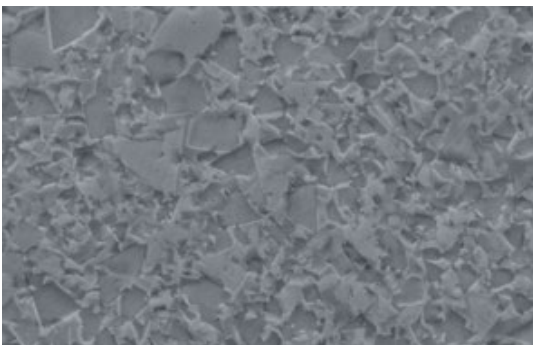


All connections have to be cleaned and free of burrs before mounting.

CTS20D

Composition and properties

CERATIZIT grade code	ISO code	US code	Binder [m %]	Density [g/cm ³]	[HV30]	[HRA]	Transverse rupture strength		Fracture toughness K _{IC} (Shetty)
							[MPa]	[psi]	[MPa*m ^{1/2}]
Submicon grade									
CTS20D	K20–K40	C-2	10.0	14.38	1600	91.9	4000	580100	10.4



CTS20D for universal machining of alloyed and non-alloyed steels. Suitable for a variety of cutting operations on different materials thanks to its balanced properties. Improved toughness ensures a low risk of cutting edge breakage

Radial and axial run-out

Achievable values for radial and axial run-out tolerances for an grounded, assembled tool (shank and head):

Radial run-out: max. 0.020 mm

Axial run-out: max. 0.015 mm

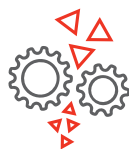
Passion for cemented carbide

From the ore to the ready-to-use-tool

CERATIZIT is one of the few carbide manufacturers who manages the entire process chain singlehandedly: from ore extraction to the ready-to-use product. In the different areas that are involved, our highly qualified experts are familiar with every single step of the production process. With our ultra-modern machine park and great manufacturing depth, we guarantee that you will be able to count on a strong partner.

To ensure the high quality of our products and the environmental friendliness of our production methods, our processes are certified to DIN ISO 9001 standards. What this means for you is that you will find the sum of all the skills of the entire CERATIZIT Group combined in each one of our products.

We manage the entire process chain



Mineral extraction

Worldwide extraction of scheelite and wolframite ore with selected business partners to ensure a responsible raw material sourcing

Preparation and mixing of the raw materials

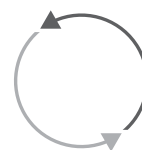
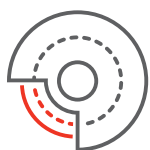
Powder and grades manufacturing, management & control

Forming / pressing

All existing shaping technologies available (extrusion, direct pressing, isostatic pressing, handshaping)

Sintering

Several decades of experience in calculating the exact sinter shrinkage, ensuring high quality of the final product



Surface treatment

Different finishing available including OD grinding, cutting, chamfering

Quality assurance

All products are subject to strict quality control by experienced professionals

Dispatch

Automated high-tech shuttle Warehouse

Recycling (optional)

We organize the entire process for you and also provide free, quantity-specific collection containers and transport solutions.

Headquarters

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