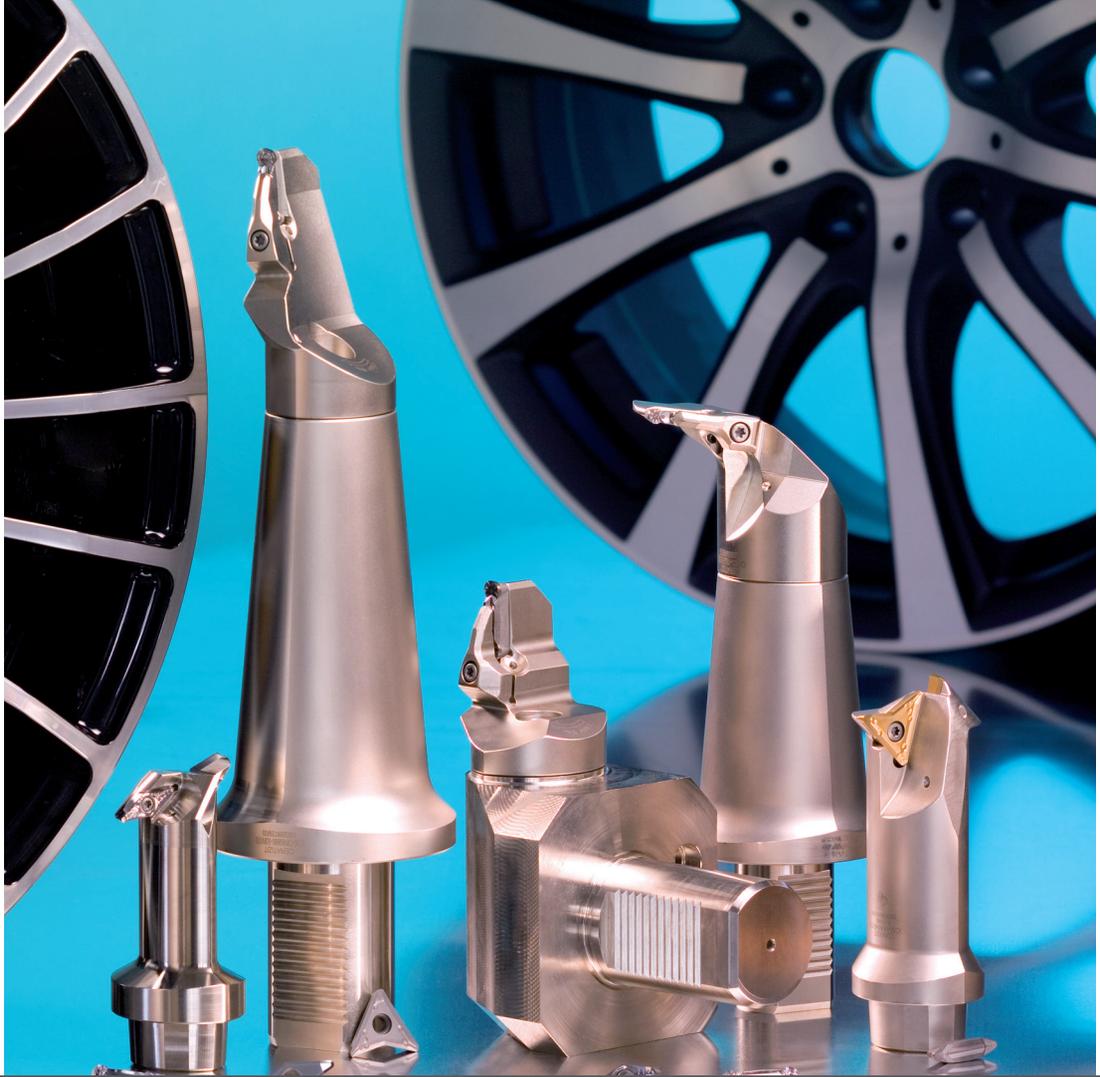


hard material matters



Tools and inserts for aluminium wheel machining

EN



Competency in machining



External machining

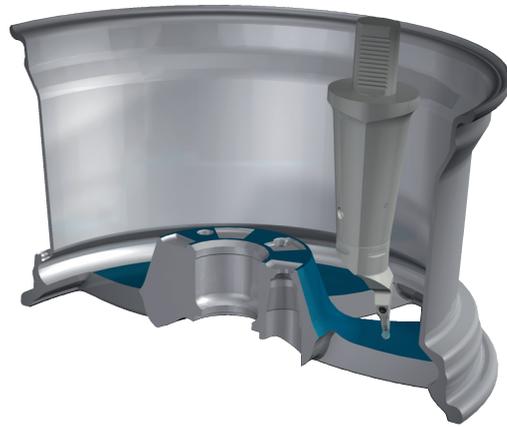




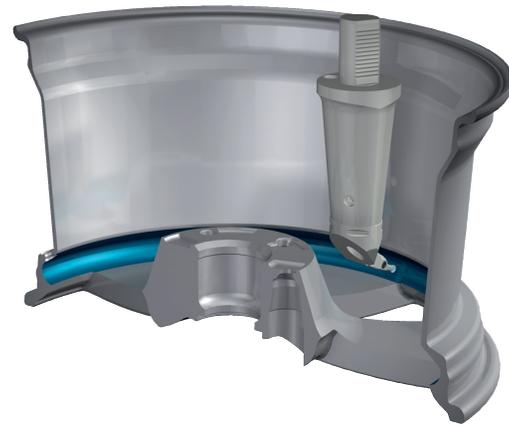
Internal machining



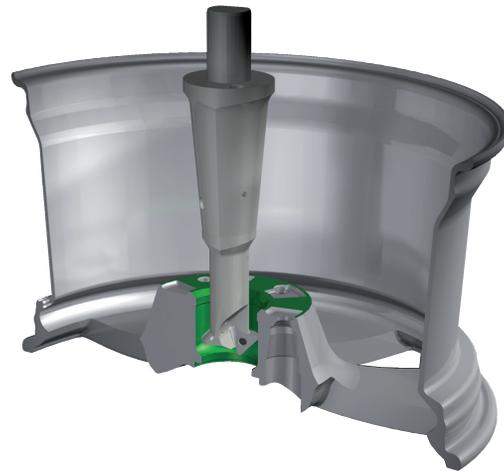
Internal machining of the contact face



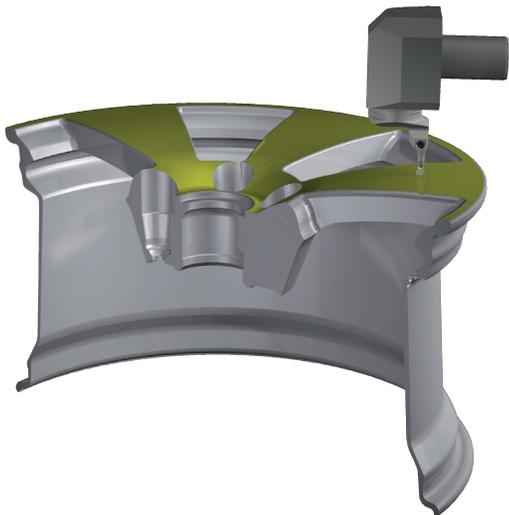
Undercut



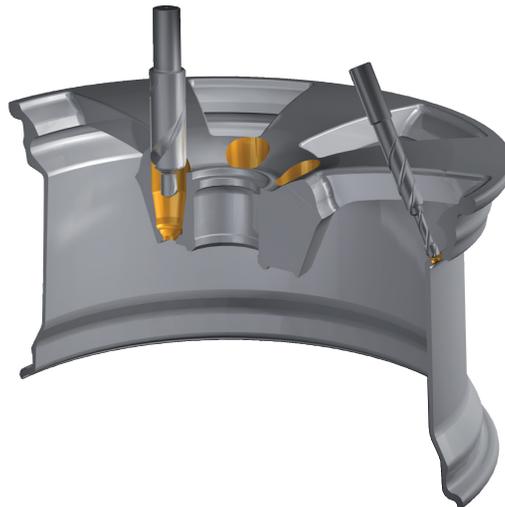
Hub machining



Mirror machining



Drilling



OvalFlex

System description

OvalFlex

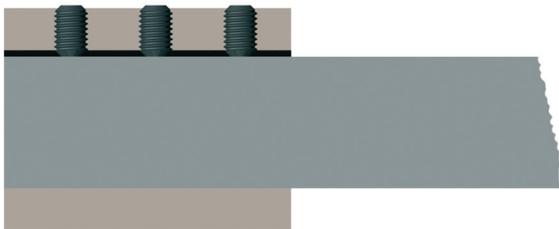
OvalFlex is a modular tooling system for the machining of the entire aluminium wheel. Depending on the respective insert, operators can machine both the external and internal profile, location face, hub profile and visible outer surfaces. Furthermore, OvalFlex can flexibly be adapted for every kind of rim.

The tapered oval shape increases stability and performance capacity compared to conventional round tools. In this way the aluminium wheel may be machined with high cutting parameters. In addition to axial clamping CERATIZIT offers radial clamping.

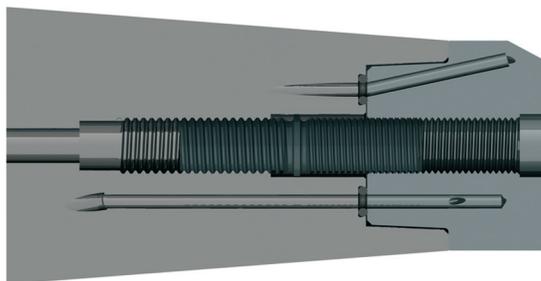
OvalCoupling (OC)

Maximum stability thanks to the connection 'OvalCoupling' (OC)

Conventional clamping

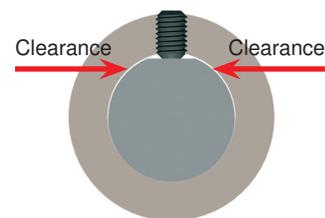


- ▶ Clearance between round shank and bore of adapter
- ▶ Unstable connection

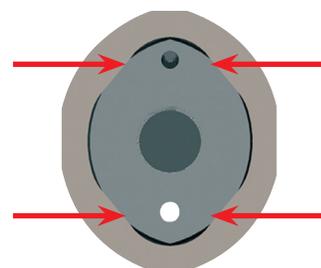


- ▶ Radial positioning through **four tapered contact faces**
- ▶ Axial positioning through **tapered contact faces** and **location face**
- ▶ 100% accurate connection

Boring bar adapter



OvalCoupling (OC)



OvalFlex Radial

OvalFlex Radial guarantees high flexibility particularly in fields where the aluminium wheel design and the dimension are frequently modified. Radial clamping was in fact developed by CERATIZIT to ensure that the tool change between the individual machining steps takes only a short time and can be carried out directly on the machine. Consequently, various tool heads can be mounted onto the base adapters in a short time. Within 8 seconds OvalFlex Radial is again ready for use.



OvalFlex HubStar

System description

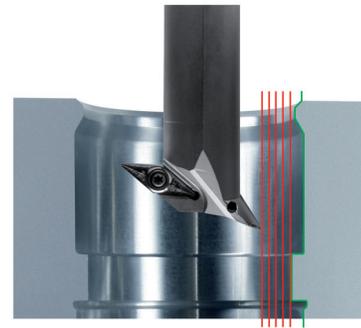
HubStar

The most substantial time saving in the field of aluminium wheel machining is possible for hubs with diameters > 60 mm. The rough diameter after counterboring, stamping etc. is normally between 40 and 45 mm. normally a V-insert is used to bore the required diameter in several stages (in some cases back-boring is required, so a tool change is necessary).

The HubStar program has been designed to produce the necessary diameter with one cut at a maximum feed rate and to turn the location face and profile of the hub with the same tool. Time savings up to 65 seconds per aluminium wheel are possible.

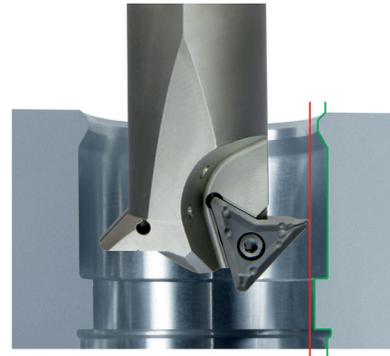
Conventional machining

several cuts



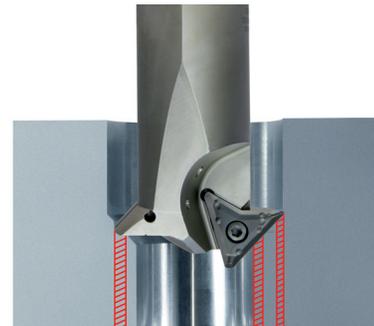
OvalFlex HubStar

now in one cut only to the required diameter



Division of cuts

Thanks to the special positioning of the insert during boring the cut and thus the forces are divided in order to make machining with minimum vibration and maximum feed rates possible.



Insert

The extremely stable HUB 1507QR-27 insert was specifically developed for the hub machining of aluminium wheels. The insert has suitable geometries and radii for every specific application:

- Radius R .8 mm: machining of the cap seat
- Radius R 1.2 mm: machining of the internal profile
- Radius R 1.6 mm: turning of the location face (higher feed rate possible)

Each of these radii has a Masterfinish edge which produces excellent surfaces at high feed rates.

R 1,2 mm R 0,8 mm



R 1,6 mm

System OvalFlex

The OvalFlex system is tailor-made for aluminium wheel manufacture and its specific machines. Optimized consistently from the cutting edge to the machine connection.

Tool heads

X32..



Adapters



Monobloc tools X32



VC..



HUB..



Adapters

