



**Special metal
cutting tools**
edition VII.



Contents

01 HW brazed cutting tools	03 - 08
02 Tools with indexable cutting inserts	09 - 10
03 Diamond tools	21 - 16
04 Solid Milling Cutters	17 - 17
05 Maintenance and Service	18 - 20



For more than fifteen years we have been manufacturing, selling and servicing tools and special tooling systems for wood, plastic and metal.

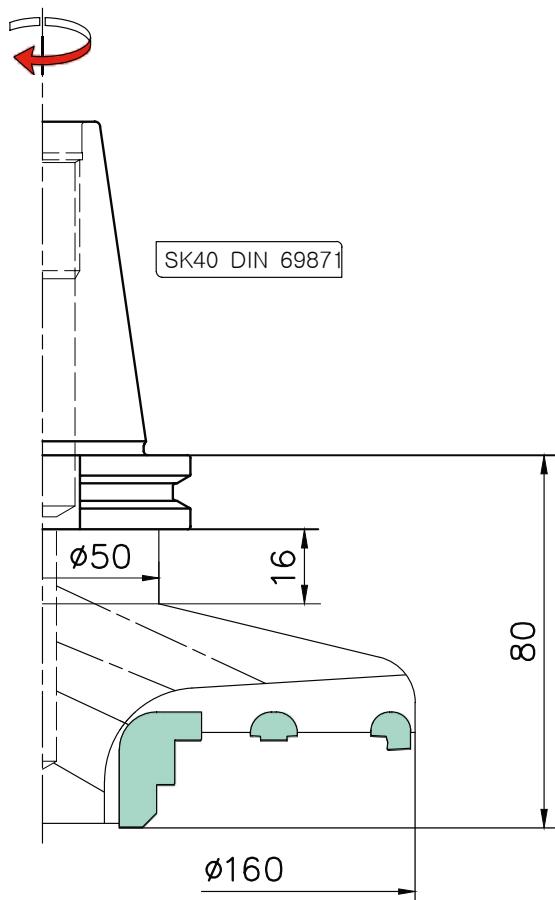
Along with the manufacture of standard tools we especially develop and manufacture special tools to suit the specific needs of customers. Apart from these products, we provide them with a range of associated services such as sharpening, repairs, modifications and reconditioning of tools supplied by us or other manufacturers.

We believe that on the road to a precise product several conditions have to be met: selection of the highest-quality material, use of state-of-the-art manufacturing, inspection and testing equipment, and full utilization of the experience and potential of our employees.

The facilities of our manufacturing plant, our professional attitude and ideas transferred from paper to manufacturing are what our customers appreciate the most. But we are aware of one more important thing: the development of a special tool is a process requiring close cooperation and great trust.

Thank you for that.





USE

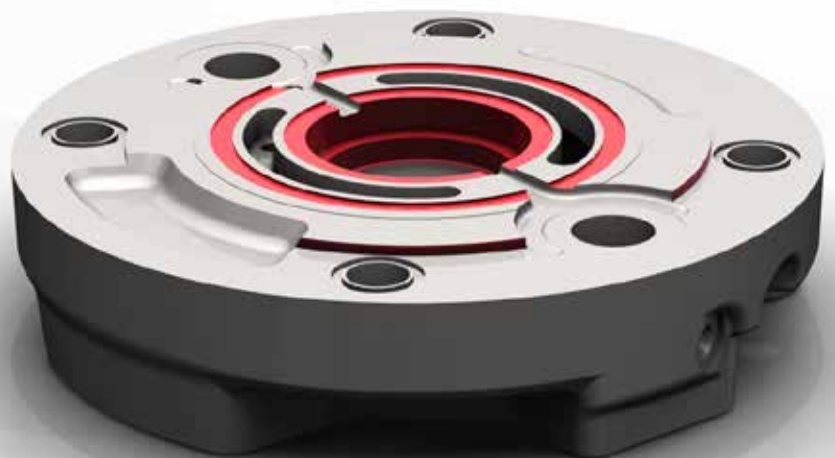
Combined tool for heavy-duty milling of recessed surfaces

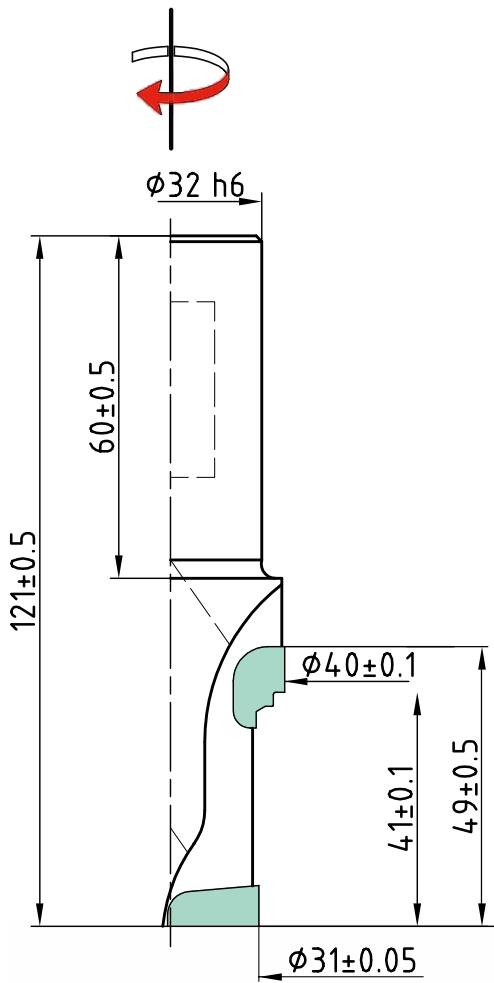
MACHINED MATERIAL

Aluminium alloys
Steel

TECHNICAL PARAMETERS

3-edged countersink
HW soldered edges
Clamping part SK40 DIN 69871
Coated ALOX Sn²





USE

Tool with split edges for heavy-duty milling of recesses

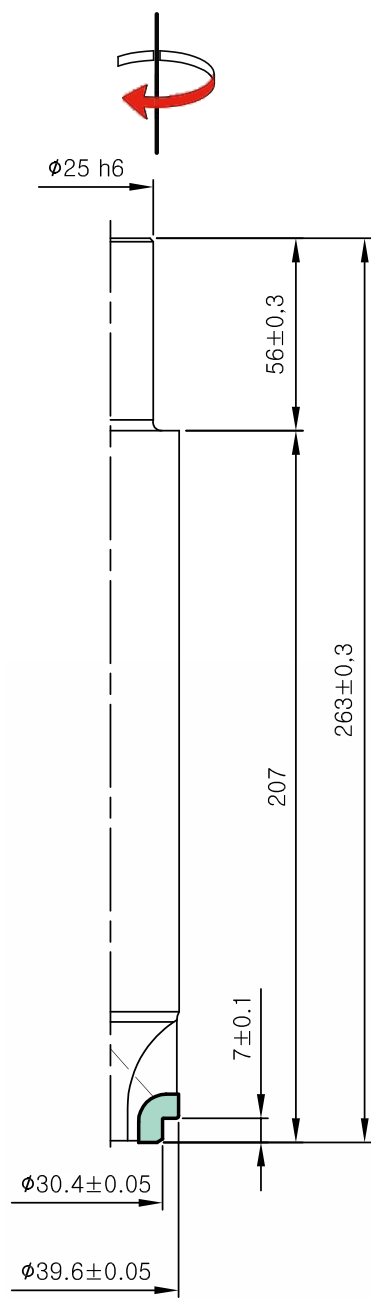
MACHINED MATERIAL

Aluminium alloys
Steel

TECHNICAL PARAMETERS

3-edged countersink
HW soldered edges
Clamping part $\phi 32 \text{ h6}$ DIN 1835
Coated ALOX Sn²





USE

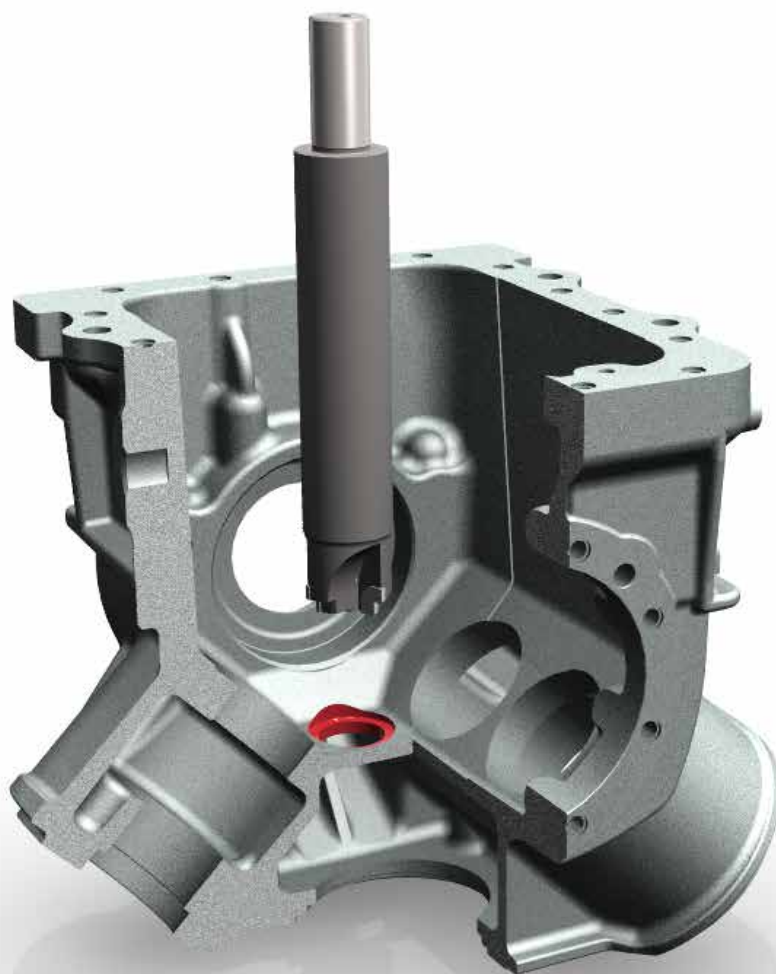
Extra-long version for recess milling

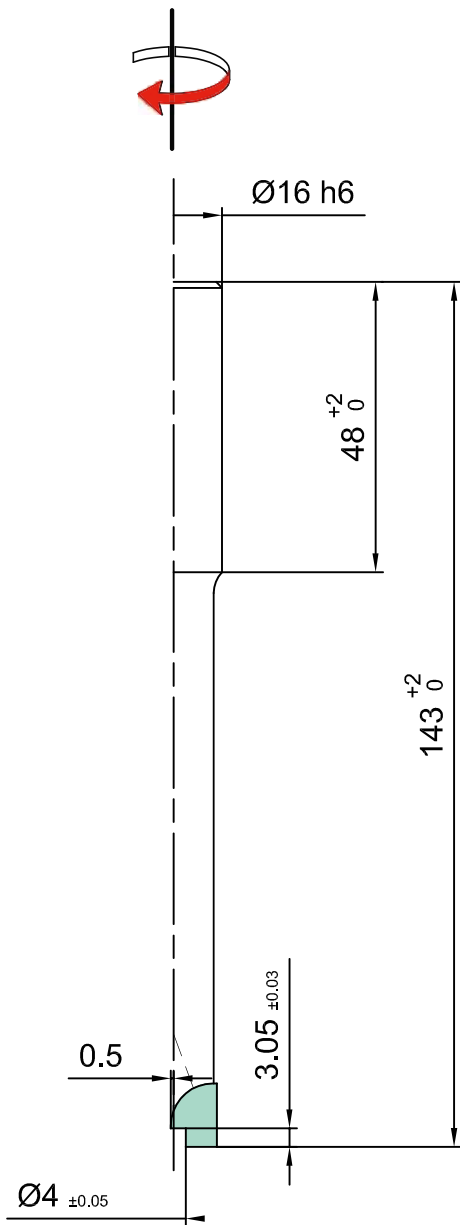
MACHINED MATERIAL

Aluminium alloys
Steel

TECHNICAL PARAMETERS

3-edged countersink
HW soldered edges
Clamping part $\phi 25\text{ h6}$ DIN 1835
Coated ALOX Sn²





USE

Extra-long version for drilling of deep holes

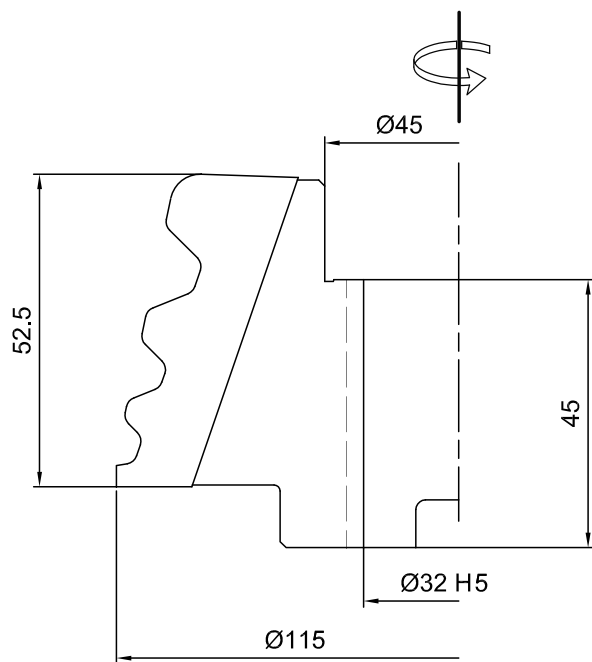
MACHINED MATERIAL

Aluminium alloys
Steel

TECHNICAL PARAMETERS

2-edged countersink
HW soldered edges
Clamping part $\text{Ø}16 \text{ h}6$ DIN 1835
Coated ALOX Sn^2





USE

Tool for highly precise milling of shaped surfaces

MACHINED MATERIAL

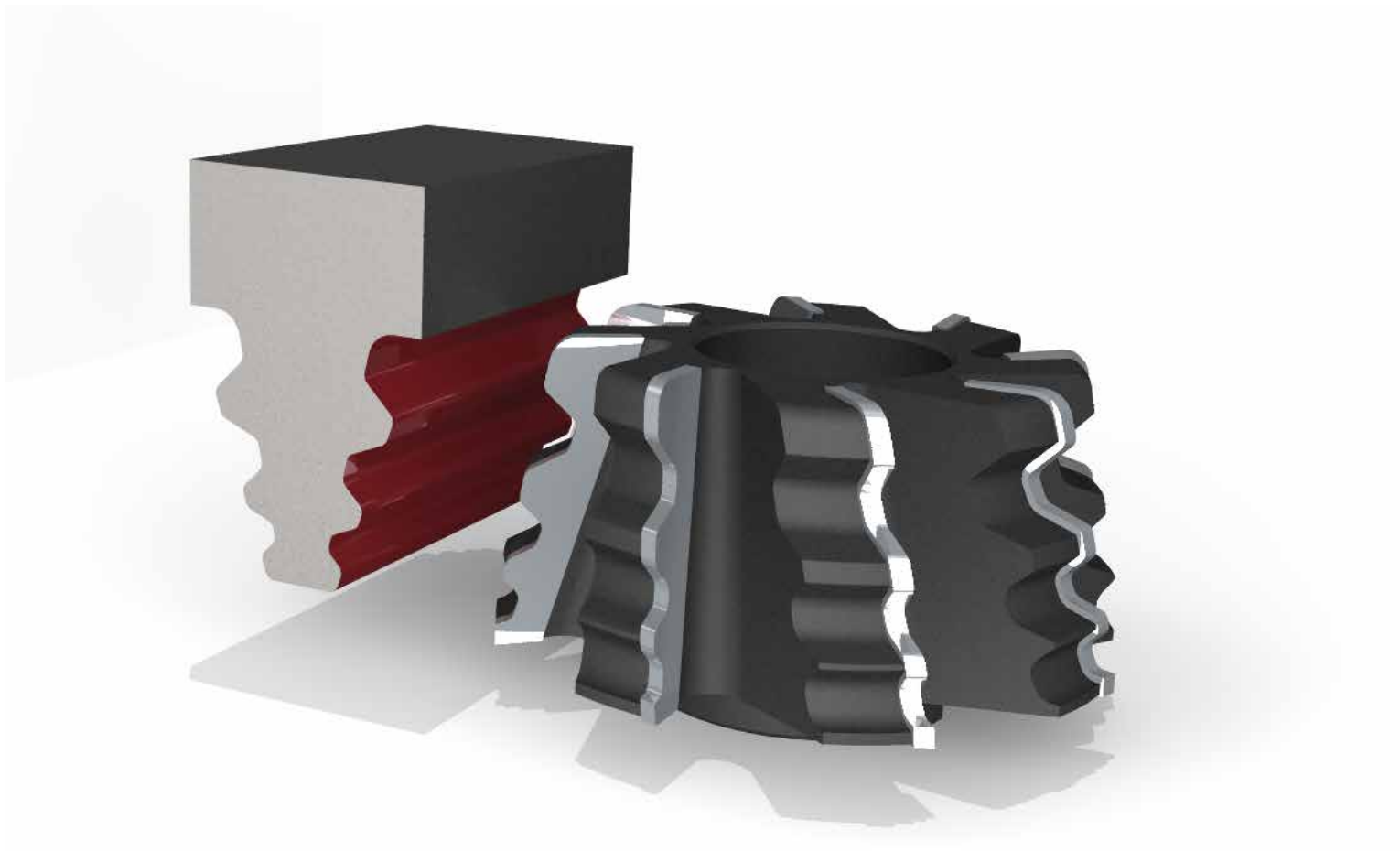
Stainless steel

TECHNICAL PARAMETERS

8-edged milling cutter

HW soldered edges

Clamping part $\varnothing 32$ H5



USE

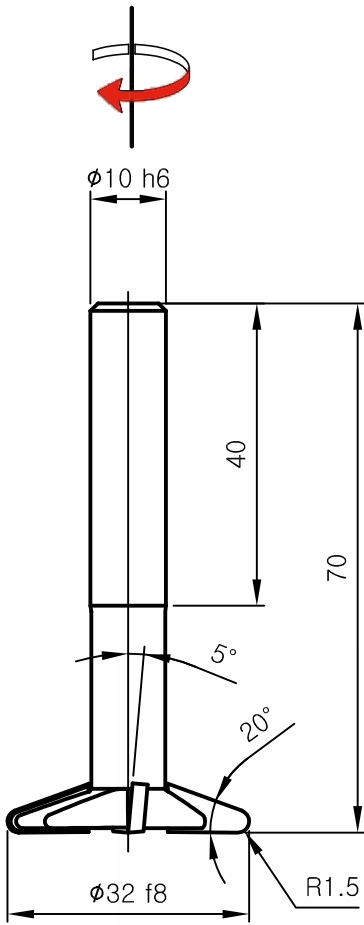
For milling of "T-shaped" grooves in nickel INCONEL super-alloys

MACHINED MATERIAL

INCONEL 718 type nickel super-alloys
resistant to high temperatures

TECHNICAL PARAMETERS

4-edged countersink
HW soldered edges
Clamping part $\varnothing 10h6$ DIN 1835
Coated ALOX Sn²



\\ ANGLE CUTTER WITH INDEXABLE CUTTING INSERTS

USE

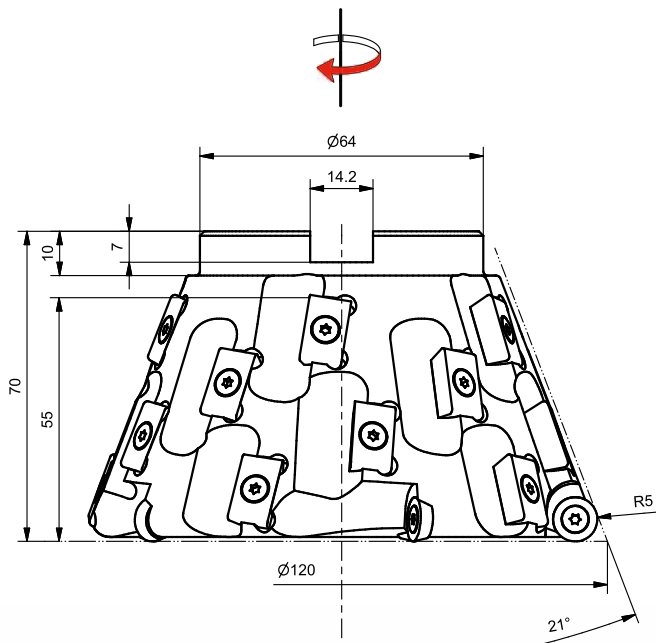
Multi-bladed cutter with transition radius R5

MACHINED MATERIAL

Steel
Aluminium alloys

TECHNICAL PARAMETERS

Z5
VBD
Clamping hole $\varnothing 32$ H7



CUTTING HEAD WITH INDEXABLE CUTTING INSERTS //

USE

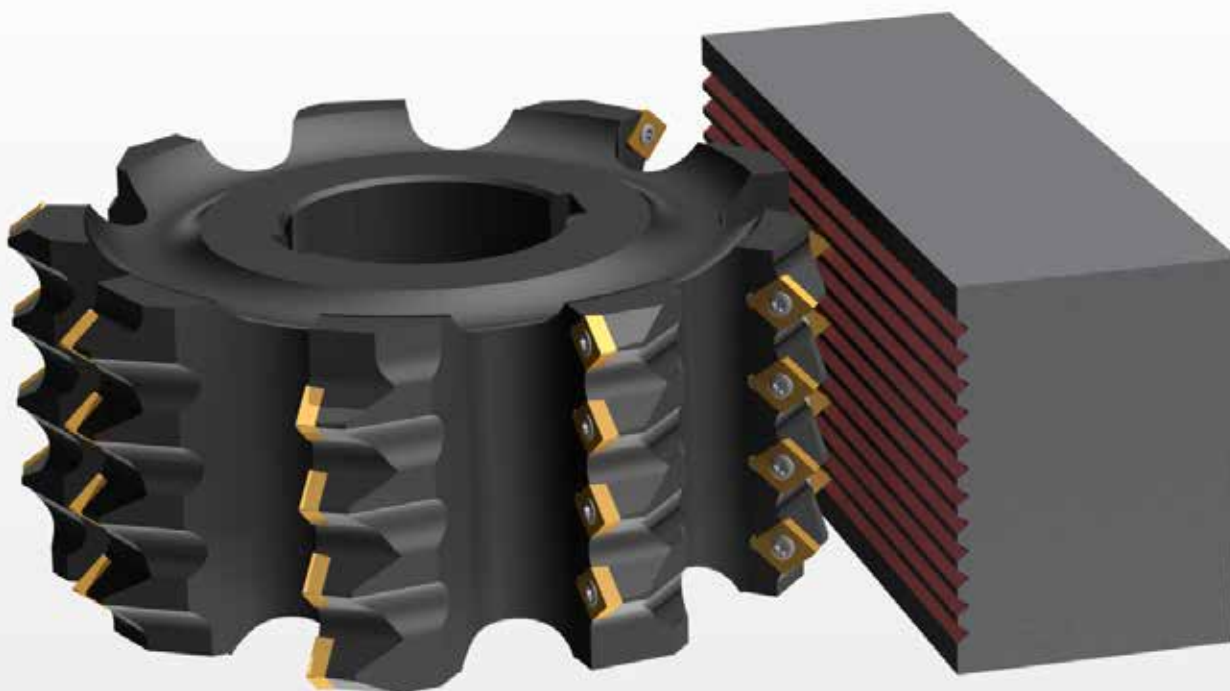
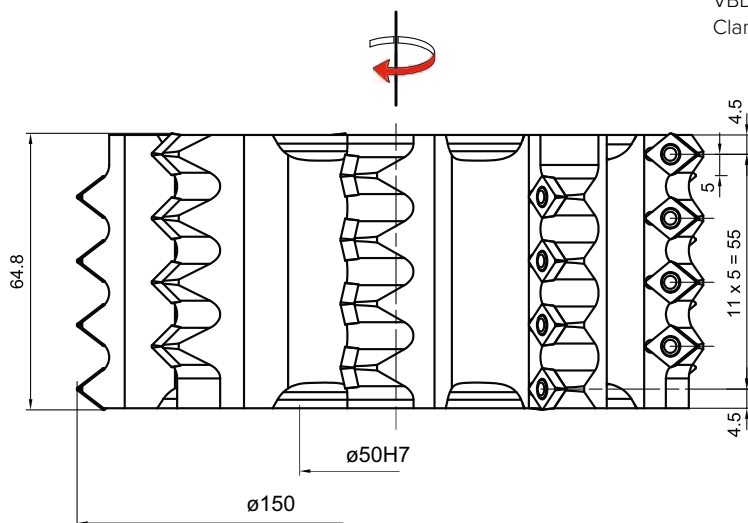
Fluting cutting head with indexable cutting inserts

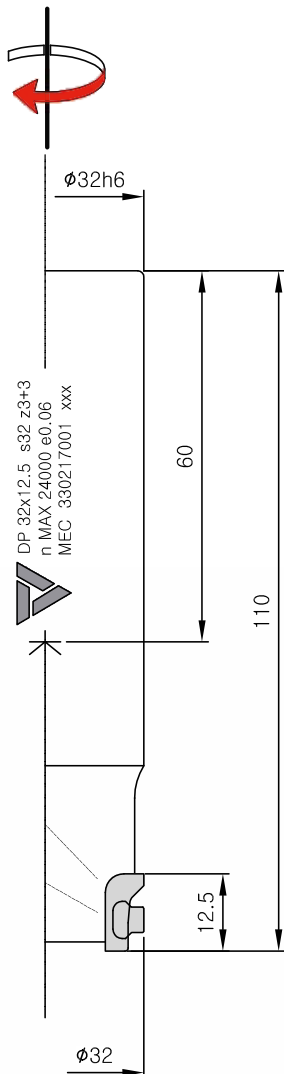
MACHINED MATERIAL

Steel

TECHNICAL PARAMETERS

Z3
VBD (36x)
Clamping hole $\varnothing 50$ H7





USE

Shank cutter with split diamond blades for milling of outer surfaces of a shaped collet

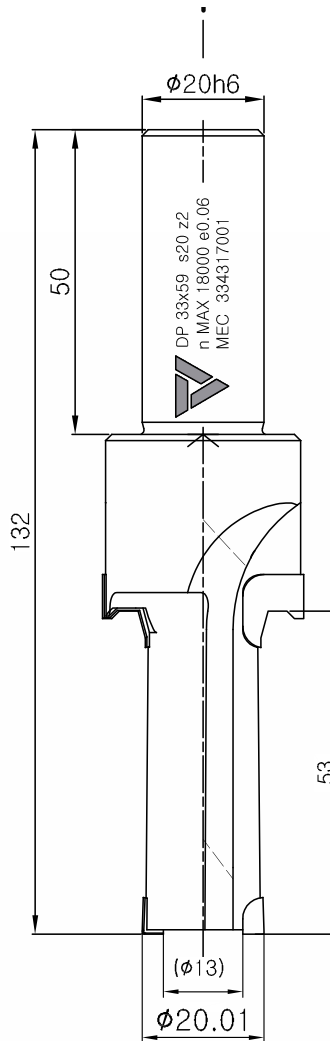
MACHINED MATERIAL

Silumin

TECHNICAL PARAMETERS

Z3+3 split blades
Diamond blades attached at axial angle
Diamond quality for Silumin
Clamping part $\phi 32$ h6 DIN 1835
Separate internal cooling for each DP segment
Smooth tool running





USE

Shank cutter with split diamond blades
for milling of deep internal surfaces of a shaped collet

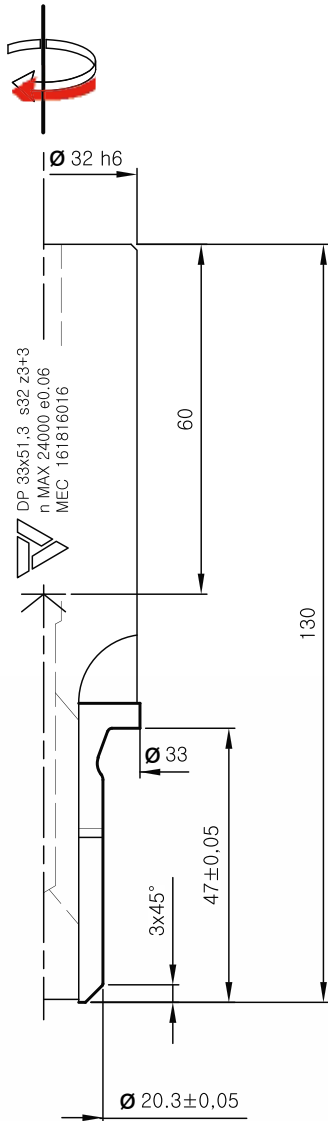
MACHINED MATERIAL

Silumin

TECHNICAL PARAMETERS

Z2+2 split blades
Diamond quality for Silumin
Clamping part $\phi 20$ h6 DIN 1835
Separate internal cooling for each DP segment
Smooth tool running





USE

Shank cutter with split diamond blades for milling of outer surfaces of a shaped collet positive/negative

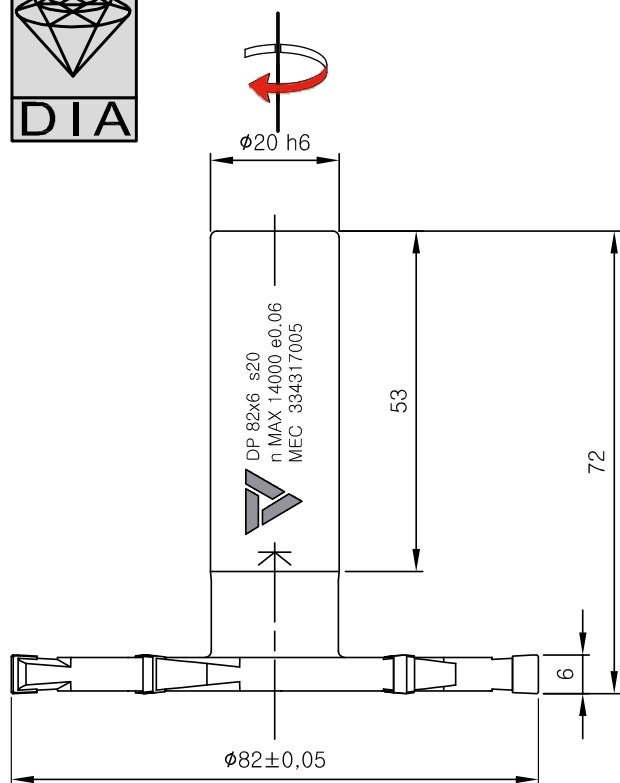
MACHINED MATERIAL

Silumin

TECHNICAL PARAMETERS

Z3+3 split blades, 3x positive + 3x negative axial angle
 Diamond quality for Silumin
 Clamping part $\varnothing 32\ h6\ DIN\ 1835$
 Separate internal cooling for each DP segment
 Smooth tool running





FLUTING CUTTER WITH DP BLADES //

USE

Shank cutter with diamond blades for groove cutting

MACHINED MATERIAL

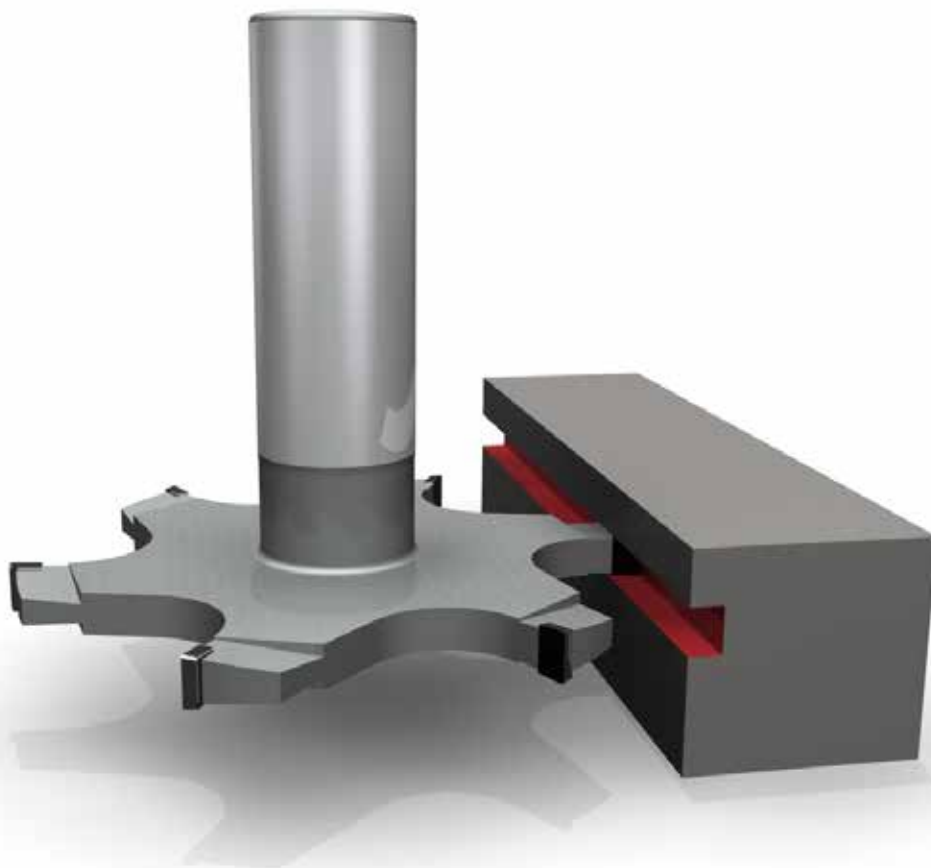
Silumin

TECHNICAL PARAMETERS

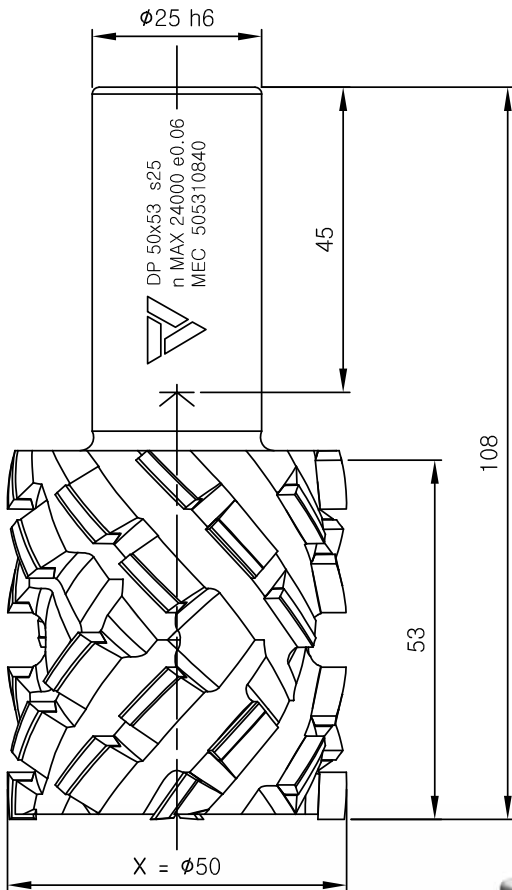
Z6

Diamond quality for Silumin

Clamping part $\phi 20\ h6\ DIN\ 1835$



\\ CYLINDRICAL CUTTER WITH DIAMOND BLADES WITH FACE CUTTING



USE

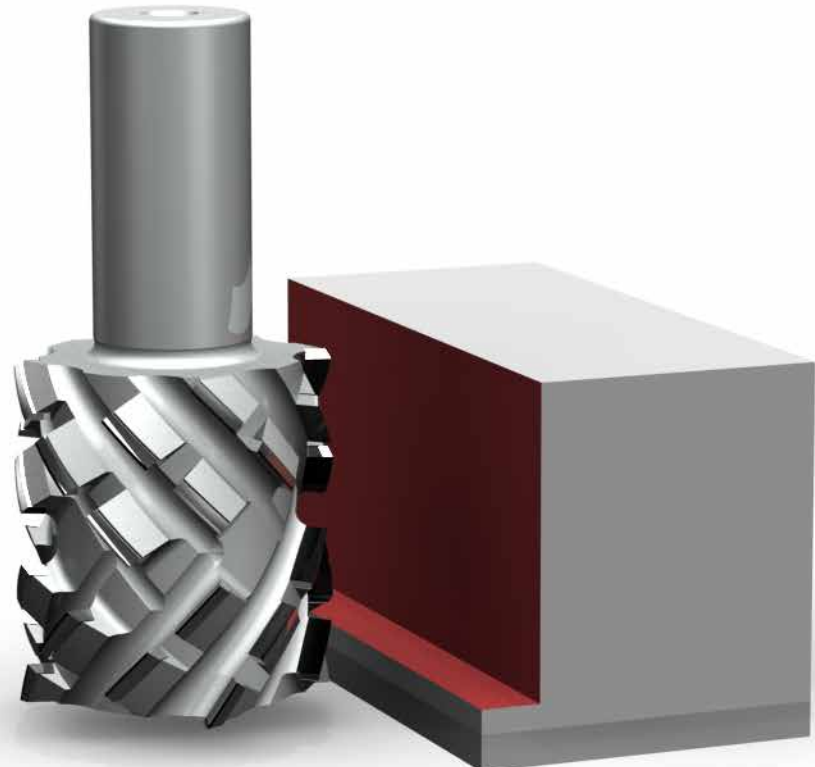
Shank cutter with split diamond blades
for milling of outer flat surfaces positive/negative

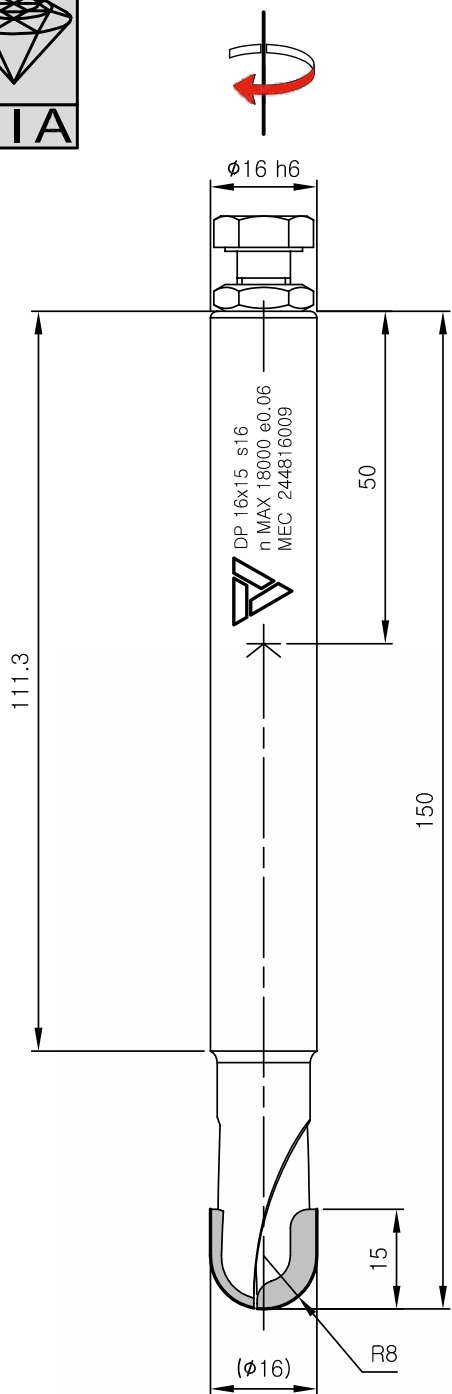
MACHINED MATERIAL

Silumin
Steel

TECHNICAL PARAMETERS

Z4 + 4 split blades, 4x positive + 4x negative axial angle
Diamond quality for Silumin
Clamping part $\phi 25$ h6 DIN 1835
Smooth tool running
High quality of machined surface
For heavy-duty machining





USE

Shank cutter with diamond blades long version

MACHINED MATERIAL

Silumin
Steel

TECHNICAL PARAMETERS

Z2
Diamond quality for Silumin
Clamping part $\phi 20$ h6 DIN 1835



USE

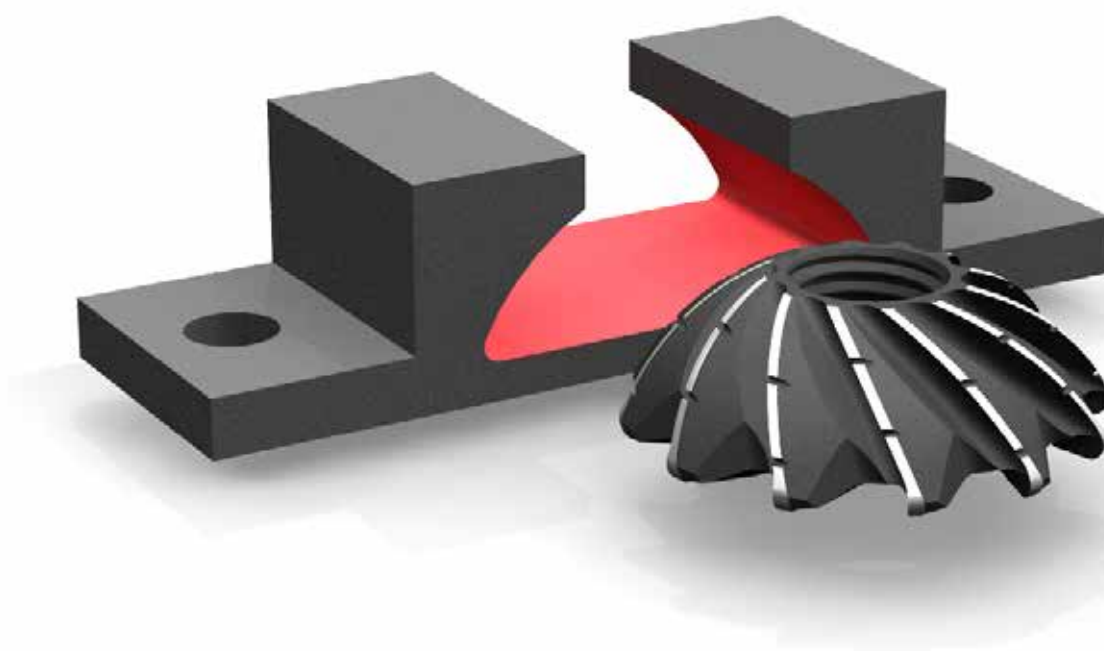
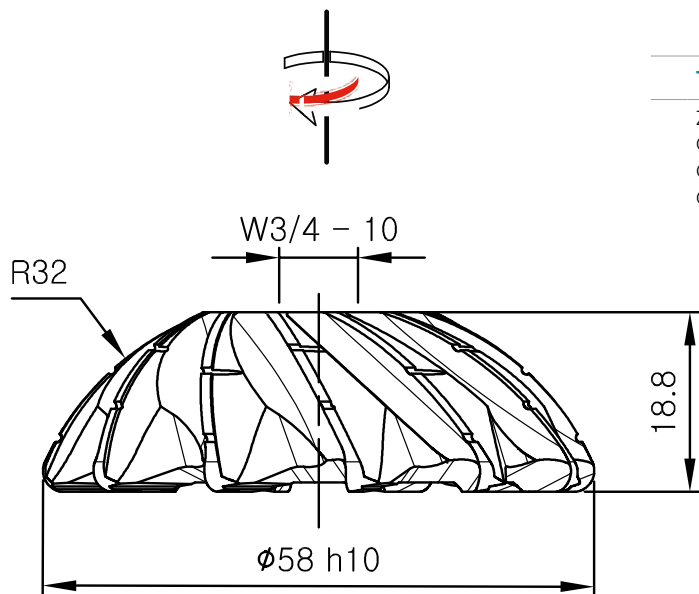
Disk cutter for milling of tough steel

MACHINED MATERIAL

Steel - rail base

TECHNICAL PARAMETERS

Z12
 Quality of PM cutter (sintered steel)
 Clamping part thread W3/4 - 10
 Clamping part thread W3/4 - 10





Maintenance Service





Good servicing, detailed technical advisory and a wide range of services are part of our philosophy and the quality you expect from us. Therefore, we offer not just a quality tool, but also a comprehensive technological solution and subsequent servicing for the life of the tool. VYDONA provides comprehensive servicing of tools from its own production and tools from other manufacturers as well. We always strive to provide a high standard in all servicing works. We provide tool servicing in the following categories::

Milling tools

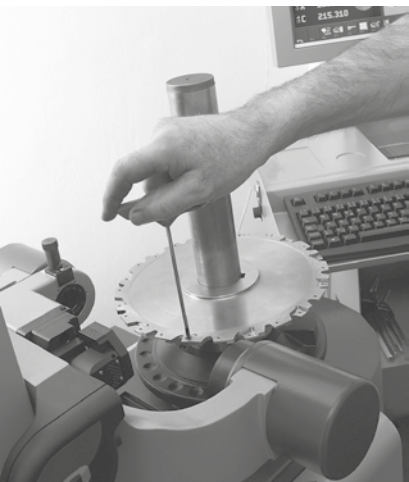
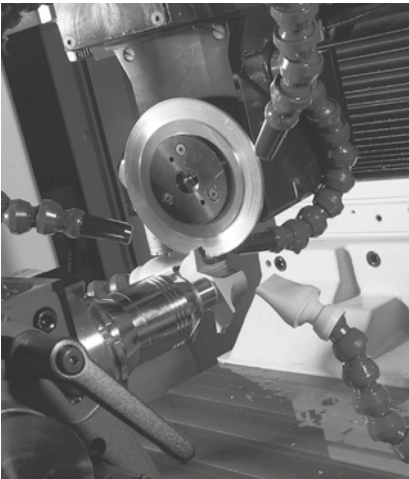
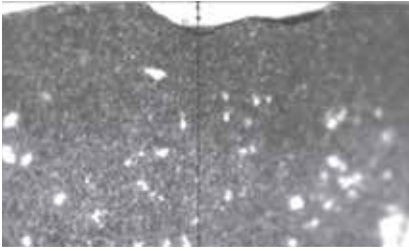
- with replaceable blade plates VBD
- with HS soldered blades
- with profile tools
- with planer tools

Milling tools

- HW solid milling shank tools
- with HS soldered blades
- with HS soldered plates
- with DP soldered plates



Check of tool shank wear



Check of tool condition

Check of blunting, mechanical wear and damage to tools

Sharpening

We use suitable highly precise CNC machines for sharpening..



Inspection and adjustment of CNC machines

Each tool is checked for circumferential play with an accuracy of 0.02mm, profile tools are inspected for shape accuracy.

Balancing

Each tool is checked for acceptable imbalance.

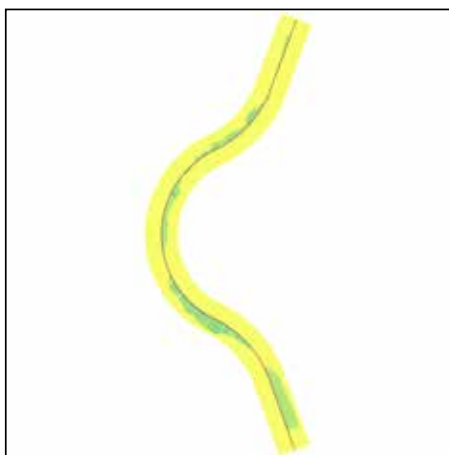
Tool imbalance is caused by:

- uneven tooth splitting
- non-standard sharpening
- manufacturing tolerances
- imbalance of Diamond tools is caused by tool blade wear due to abrasion of the body behind DP blade



LASSO - optical check of the grind shape

Střední odchylka (celkově)	-0,001	Posunutí X	76,712
Střední odchylka (vně)	0,007	Posunutí Z	-46,347
Střední odchylka (uvnitř)	0,007	Posunutí Phi	-0,25
Střední odchylka (X)	0,000	Vnitřní tolerance	-0,020
Střední odchylka (Z)	-0,001	Vnější tolerance	0,020
Střední odchylka (Phi)	0,02		
Maximální odchylka (vně)	0,017		
Maximální odchylka (uvnitř)	0,018		
Maximální odchylka (X)	-0,016		
Maximální odchylka (Z)	-0,016		
Využité subpixely (% , celkem)	100,00		
Využité subpixely (% , uvnitř)	58,40		
Využité subpixely (% , vně)	41,60		
Tolerované subpixely (% , celkem)	100,00		
Tolerované subpixely (% , uvnitř)	100,00		
Tolerované subpixely (% , vně)	100,00		



Zkušební protokol

«genius Standard»

Uživatel zoller

1 / 1

21.7.2015

11:16:03



Ident.-č. 970201-L-10

Ozn. Srovnávací fréza DP 60x64x25DKN

Komentář

Zkušební technik

Stupeň	Výsledek	Požad.hodn.	H. tol.	S. tol.	Skut.hodn.	Tolerance
1	Příčná hodn.	60,000	0,020	-0,020	60,018	
1	Úhel 2				15,48	
1	Házení	0,000	0,020		0,018	
2	Příčná hodn.	60,000	0,020	-0,020	60,006	
2	Házení	0,000	0,020		0,008	
3	Příčná hodn.	60,000	0,020	-0,020	60,006	
3	Házení	0,000	0,020		0,009	
4	Příčná hodn.	60,000	0,020	-0,020	60,000	
4	Házení	0,000	0,020		0,002	
5	Příčná hodn.	60,000	0,020	-0,020	60,002	
5	Házení	0,000	0,020		0,005	
6	Příčná hodn.	60,000	0,020	-0,020	60,000	
6	Házení	0,000	0,020		0,000	
7	Příčná hodn.	60,000	0,020	-0,020	59,962	
7	Házení	0,000	0,020		0,004	
8	Příčná hodn.	60,000	0,020	-0,020	59,980	
8	Házení	0,000	0,020		0,005	

Všechny jednotky délky v Milimetr, všechny jednotky úhlu v Stupně decimálně

VYDONA spol. s r.o., Pravčice 244, 768 24 Hulín
www.vydona.cz

Final report

The servicing also includes final reports on the precision of sharpening and a balancing report according to DIN ISO 1940



