



STELLA GRUPPE

German Precision Grinding Wheels

GEAR AND THREAD GRINDING

Continuous generating grinding

Continuous generating profile grinding

Single flank generating and profile grinding

Spiral bevel gear grinding

Deburring

Thread grinding



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SCHMIRGELWERK CHEMNITZ GmbH
Chemnitz

CAPILLAR SCHLEIFKÖRPERWERK GmbH
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GEAR AND THREAD GRINDING

STELLA has experience in producing precision grinding wheels for more than 80 years. By means of special combinations of high-quality abrasive grain types, improved vitrified bonds and innovative manufacturing processes a new generation of conventional grinding tools has been designed: **STELLA select (STs)**.

In order to achieve optimal cutting features for gear grinding we use abrasive grain compositions of sintered aluminium oxide and special corundums (e.g. monocrystalline or ruby fused aluminium oxide). Highest porosity that is matched to the grinding task by its size and distribution abets the chip removal.

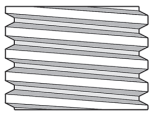
Special vitrified bonding systems which are adjusted to the particular grinding application by their elasticities, consistencies and their flowability ensure that the selected abrasive grains are integrated in an optimal way into the abrasive wheel's matrix.

What are the distinctive features of **STs**-grinding wheels?

They do not have only a high and constant cutting efficiency but also a very good form retention in connection with an optimal and economic utilization of the abrasive grains. Due to expanded dressing cycles the grinding process times are shortened and the wheel's lifetime is extended. The cool cutting effect is an additional important advantage.

Continuous generating grinding

current shapes



Shape 1Sp
Shape 7Sp

Machines of (e.g.):

Reishauer
Pfauter Gleason
Samputensili
Liebherr
Kapp
Czapel

The worm grinding wheels can be produced with one start or with multi-starts (up to 7 starts).

Speeds: 40 m/s, 50 m/s, 63 m/s

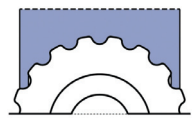
Module	Specification of grinding wheels
0,5 – 1,25	20A 150 i8 VX 92/283A 150 Jot8P1 V10
1,0 – 3,5	20A 120 i8 VX 283A 120/2 i-Jot10 VX 92/283A 100/2 i8P1 V10 92/313A 100/2 Jot10P1 V10 94A 100/2 i8P1 V10
2,0 – 7,0	20A 100 i8 VX 283A 80/5 i-Jot10 VX 92/283A 90/2 Jot12P02 V10 92/313A 80/5 Jot10P1 V10 92/313A 80/2 i12P02 V8KK125 94A 80/5 i8P1 V10
larger than 6,0	20A 80 i8 VX 92/313A 80/10 H11P0 V10





Continuous generating profile grinding

current shapes



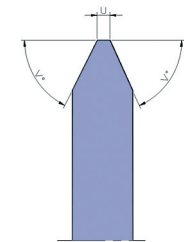
Shape 1Sp

Machines of (e.g.):
Reishauer RZP
Reishauer RZF

Specifications
20A 100/2 G17P1 V10
92A 120 H17P1 V10

Single flank generating and profile grinding

current shapes



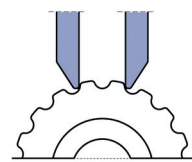
Shape 1ESp

Machines of (e.g.):
Höfler
Kapp
Kownatzki
Klingelnberg/Oerlikon

Niles
Pfauter
Reform
Samputensili

Speeds: 40 m/s, 50 m/s, 63 m/s

Module	Specification of grinding wheels	
	Single flank generating grinding	Profile grinding
1,0 – 3,0	20A 80/2 Jot14P1 V6 94A 80/2 Jot14P1 V10	20A 80/2 H17P1 V6 94A 80/2 i16P1 V10
3,0 – 6,0	20A 60/2 Jot14P2 V6 94A 60/2 Jot14P2 V10	20A 60/2 H17P2 V6 94A 60/2 i16P2 V10
larger than 6,0 and rough grinding	20A 46/2 i8P2 V55 92A 46/2 i10P2 V10	20A 46/2 H14P2 V6 94A 46/2 i14P2 V10



Shape 12Sp

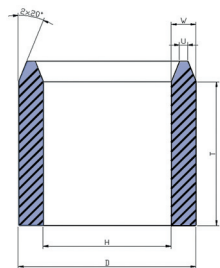
Machines of (e.g.):
Maag

Specification of grinding wheels

Rough grinding	Finishing
94A 46 E9P1 V8 94A 54/2 G9P1 V8	94A 80 G9P1 V8

Speeds: up to 32 m/s

Spiral bevel gear grinding



Shape 2Sp

Machines of (e.g.):
Gleason
Klingelnberg

Specification of grinding wheels

Universal use	223A 60 i5 V23 92A 70 i8P2 V8 BP 80 i8P02 V8
	94/223A 54/2 i14P02 V8 94A 70/6 i16P02 V8

Speeds: up to 32 m/s

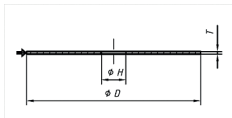
The mentioned qualities are mainly used for case-hardened steels.



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Deburring



Shape 1

Machines of (e.g.):

Rausch

Speed: 80 m/s

Specifications:

1A 60/6 V4 BF

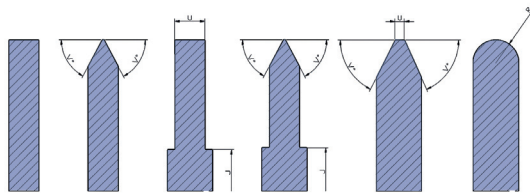
2A 70/12 T5 BF

1A 100 T BF

1A 100 V BF2

Thread grinding

current shapes / single-rib grinding



Shape 1, 1E, 1ESp, 1F
Shape 39, 39E

Machines of (e.g.):

Klingelnberg

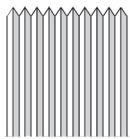
Lindner

Reishauer

Samputensili

WMW

current shapes / multi-rib grinding



Shape 1

Speeds: 40 m/s, 50 m/s, 63 m/s

For special applications we customize shape, dimension and specification to your individual operating conditions and requirements.

Thread pitch/mm	Specification of grinding wheels		
Unhardened and case-hardened steel	Traverse grinding with single-rib grinding wheels	Traverse grinding with multi-rib grinding wheels	Plunge grinding with multi-rib grinding wheels
0,6 – 0,8	20A 320 M7 V16cbt	20A 320 L7 V16cbt	20A 320 Jot7 V16cbt
0,9 – 1,5	20A 240 M7 V49	20A 240/2 L7 V1	20A 240/2 Jot7 V1
1,75 – 2,5	20A 180 M7 V49	20A 180 Jot7 V1	20A 180 i7 V1
2,75 – 6,0	20A 120 L7 V1	20A 120 Jot7 V1	20A 120 i7 V1

Thread pitch/mm	Specification of grinding wheels		
Tool steel and high-speed steel (HSS)	Traverse grinding with single-rib grinding wheels	Traverse grinding with multi-rib grinding wheels	Plunge grinding with multi-rib grinding wheels
0,6 – 0,8	70C 320 Jot8 V40cbt	70C 320/2 i8 V40cbt	70C 320/2 i8 V40cbt
0,9 – 1,5	60C 280 Jot7 V30	70C 320 i8 V40cbt	70C 320 i8 V40cbt
1,75 – 2,5	60C 220 K7 V30	70C 240/5 Jot7 V30	70C 240/5 Jot7 V30
2,75 – 6,0	60C 150 K7 V30	70C 240 Jot7 V30	70C 240 Jot7 V30

Please observe the FEPA safety recommendations for the correct use of grinding tools.
www.fepa-abrasives.org

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