

**VIB STAR - YOUR HEALTH
IS OUR CONCERN!**



★★★ PREMIUM VIB STAR

- Significantly reduced vibration levels
- Optimised running characteristics
- Increased machine tool life

ARE TOOLS THAT HELP REDUCE VIBRATION AND NOISE LEVELS IMPORTANT TO YOU? TYROLIT HAS THE SOLUTION!

TYROLIT offers products that minimise vibrations and noise during grinding and cutting.

Vibrations from resinoid-bonded grinding tools affect the upper surface finish, and are a source of stress to man and machine.

Prolonged exposure to vibrations during cutting and grinding with angle grinders can ultimately lead to circulatory disorders and can cause Hand Arm Vibration Syndrome.

How do vibration and noise arise during grinding and cutting?

- Disc imbalance (tolerances)
- Variations in the wheel shape and position
- Imprecise tool moulding prior to pressing, causing imbalance variation in shape and position
- Incorrect oven hardening times cause variations in shape

All TYROLIT products are manufactured in compliance with the exacting European standards EN 12413 and EN 13743, and are constantly monitored throughout production. Within TYROLIT branded abrasives, we have products that are optimised for performance ergonomics. We have selected some of these product solutions that will help in the reduction of Hand Arm Vibration Syndrome.

Reducing the sound level by 10dBa minimises the subjective noise perception by 50 %!

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The TYROLIT multilayer wheel system with fixed plastic flansh is user and machine friendly for professionals. The innovative design of the wheel reduces vibration on the user's body by 50 %. The new **VIB STAR** technology works against occupational illnesses such as muscle and bone damage, neurological diseases and blood circulation problems.

Convincing benefits

- Reduced vibration level by 50 % compared to standard grinding discs
- Optimised running characteristics
- Increased machine tool life



Shape	Dimensions	Specification	Type-No.	Material	Machine
 27	178x7x22,23	A30R-BFX	474524		
	230x7x22,23	A30R-BFX	474526		
 27	178x7x22,23	ZA24N-BFX	474527		
	178x7x22,23	ZA24P-BFX	474528		
	178x7x22,23	ZZA24R-BFX	474529		
	178x7x22,23	ZZA24S-BFX	474531		
	230x7x22,23	ZA24N-BFX	474532		
	230x7x22,23	ZA24P-BFX	474533		
	230x7x22,23	ZZA24R-BFX	474534		
	230x7x22,23	ZZA24S-BFX	474535		

Facts and Figures

- $v_s = 80$ m/s
- Resinoidal bonding
- Fibre-filled moulding material
- Vibration damping and multilayer system
- Complies with EN12413



TÜV certificate

Measured values are tested, confirmed and certified by the TÜV Austria. This innovative technology is patent pending by TYROLIT.



SPECIAL PRODUCTS FOR LOW VIBRATION AND LOW NOISE GRINDING AND CUTTING

EXTRA-THIN CUTTING WHEELS – 0,75 – 1 mm thin



Advantages

- No need for powerful grinders
- Less exertion whilst in use
- Optimised in performance
- Reduced machine strain
- Lower material waste
- Cutting noise and dust are reduced

FLAP WHEELS – Available from 100 mm to 178 mm diameter



Advantages

- Ease of handling
- Smooth and quiet grinding
- Whilst in use, the weight of the grinder is sufficient – no additional force is needed
- Universally applicable and measurably quieter
- Better surface finish with low degree of roughness

★★★ PREMIUM RONDELLER ★ BASIC TOUCH – Available from 100 mm to 178 mm diameter



Advantages

- Fits all standard grinders
- Reduced noise level
- Universally applicable
- Low in vibration
- Adapts to the work piece contours during use

SILENTIO ABRASIVE WHEELS – Available from 115 mm to 230 mm diameter



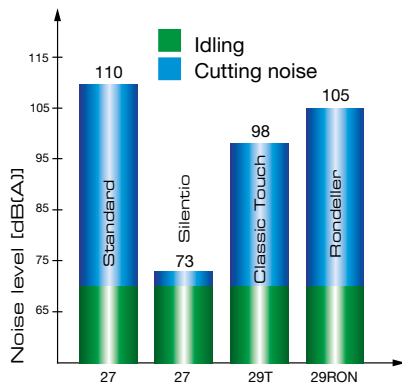
Advantages

- Reduced noise level (damping foil)
- Universally applicable (regular/stainless steel)

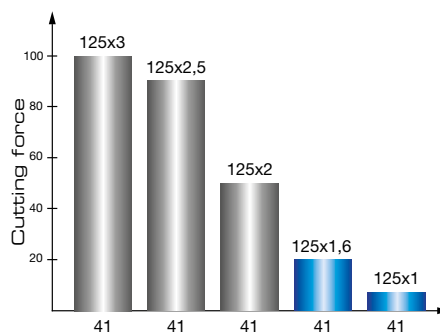
The damping foil between fine and coarse grain layers does not just reduce any vibrations arising but also minimises grinding noise by up to 50 %.

UNCHALLENGED TYROLIT TECHNOLOGY!

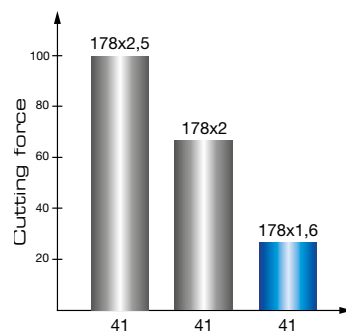
Comparison between the noise development of conventional grinding wheels and that of the Silentio grinding wheel, the flap wheel and the Rondeller.



Comparison of the resultant cutting forces at 125 mm diameter and thickness 3 / 2.5 / 2 / 1.6 / 1



Comparison of the resultant cutting forces at 178 mm diameter and thickness 2.5 / 2 / 1.6 / 1



Comparison

The thicker the grinding wheel used, the higher the vibration levels. The diagrams demonstrate graphically the advantages of Extra-thin TYROLIT cut off wheels in comparison to standard cut off wheels.

Quality

TYROLIT Extra-thin cut off wheels dramatically reduce cutting forces and vibration. Despite the technical advantages, protective clothing is of paramount importance when cutting and grinding.

Parameters

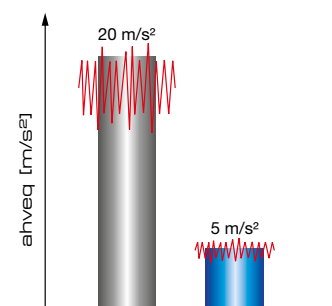
The resultant cutting forces were measured using a constant feed rate during cutting.

Praxis test

Used angel grinder under load with hard foundry specification (high amount of zirconium aluminium oxide)

- Standard grinding disc with 20 m/s²: **30 min/day** max. exposure time
- VIB STAR with 5 m/s²: **8 h/day** max. exposure time

Significant increase of operator working time!



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