



Premium Die Casting Tool Steel Made in Germany

SCHMIEDEWERKE GRÖDITZ



Schmiedewerke Gröditz
GMH GRUPPE

Strength that Lasts

PREMIUM DIE CASTING TOOL STEEL MADE IN GERMANY



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Strength that Lasts

BUILT FOR LONGER DIE LIFE. DESIGNED FOR RELIABLE PRODUCTION.

In today's die casting industry, success depends on more than steel. It requires reliable supply, consistent quality, long tool life and materials capable of supporting increasingly demanding structural, mega-casting and giga-casting applications.

For more than 245 years, Schmiedewerke Gröditz has helped customers meet these challenges through premium ESR tool steels, advanced forging expertise and integrated heat treatment capabilities.

From standard die casting components to large structural castings, Schmiedewerke Gröditz provides the metallurgical foundation for productive and reliable die casting operations worldwide.



WHAT THIS MEANS FOR YOU

Reliable Supply for Long-Term Success

More than 245 years of steelmaking expertise, industrial-scale production and long-term customer partnerships provide dependable material availability for critical die casting applications worldwide.

Longer Tool Life

Premium ESR metallurgy, optimized forging and advanced heat treatment technologies help maximize die life and reduce downtime.

Ready for Structural, Mega- and Giga-Casting

Large-format ESR ingots, powerful forging presses and large-scale heat treatment capabilities support the production of the largest die casting tools.

Lower Total Processing Costs

Integrated steelmaking, forging and heat treatment help simplify your supply chain and improve production efficiency.

BUILT FOR LARGE STRUCTURAL CASTINGS

Cleaner Steel for Longer Tool Life

One of the world's largest in-house ESR facilities enables production of premium tool steels with exceptional cleanliness, homogeneity and toughness.

Your benefit:

- ✓ Increased resistance to thermal fatigue
- ✓ Reduced susceptibility to cracking
- ✓ Longer tool life
- ✓ More stable production processes

Homogeneous Properties – Even in the Largest Die Blocks

Large in-house heat treatment facilities for bars and blocks used in HPDC applications ensure fine-grained and homogeneous microstructures, even in very large sections.

Your benefit:

- ✓ Consistent hardness
- ✓ Improved machinability
- ✓ Optimized die performance
- ✓ High Homogeneity

Built for Large Structural, Mega- and Giga-Casting Dies

Open-die forging presses with up to 6000 t press power enable intensive deformation of large tool steel blocks.

Your benefit:

- ✓ Superior material integrity
- ✓ Most uniform properties throughout large sections
- ✓ Enhanced fatigue resistance
- ✓ Optimized performance in large structural dies
- ✓ Suitable for the largest die casting applications

Supporting the next Generation of Structural Castings

Schmiedewerke Gröditz tool steels are used in dies for demanding structural applications, including:

- ✓ Battery housings
- ✓ Motor carriers
- ✓ Structural chassis components
- ✓ Large automotive body structures
- ✓ Mega-casting and giga-casting applications

Engineered to support the future of lightweight and electric vehicle manufacturing.



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WHEN PRODUCTIVITY DEPENDS ON TOOL LIFE

High Pressure Die Casting tools operate under some of the most demanding conditions in manufacturing.

Every casting cycle exposes the die to:

- Extreme thermal loads
- Rapid heating and cooling cycles
- High mechanical stress
- Aggressive molten metal flow
- Continuous wear and erosion

These conditions challenge the performance and lifetime of every die.



LONGER TOOL LIFE. HIGHER PRODUCTIVITY.

Schmiedewerke Gröditz die casting tool steels are engineered to deliver:

- ✓ Excellent thermal fatigue resistance
- ✓ High temperature strength
- ✓ Advanced wear resistance
- ✓ Outstanding toughness
- ✓ Very high ductility

Resulting in:

- ✓ Longer maintenance intervals
- ✓ Reduced downtime
- ✓ Higher productivity
- ✓ Lower cost per casting

Because every additional shot counts.

SOLUTIONS FOR EVERY DIE CASTING CHALLENGE

SWG EX3 VICTORY ESR

(SWG 2343 VICTORY ESR)

The proven choice for reliable die life and structural die casting applications

ESR-remelted hot-work tool steel based on AISI H11 / NADCA Grade D, combining high toughness with good thermal conductivity.

Your benefits

- ✓ Well known resistance to thermal fatigue and heat checking
- ✓ High toughness for reliable die performance under demanding conditions
- ✓ Good thermal conductivity for stable thermal management
- ✓ Reduced risk of crack formation
- ✓ Economy and safety for many die casting dies

Typical applications

- Medium and large HPDC dies
- Structural aluminum castings
- Magnesium die casting
- Automotive and industrial light-metal casting applications

SWG EX4 VICTORY ESR

(SWG 2344 VICTORY ESR)

The global standard for reliable tool life and increased wear resistance

ESR-remelted hot-work tool steel based on AISI H13 / NADCA Grade B, offering higher wear resistance than H11 while maintaining high toughness and reliability.

Your benefits

- ✓ Increased wear resistance for thermally higher loaded tools than AISI H11
- ✓ Consistent performance in demanding production environments
- ✓ Stable reaction in long production runs
- ✓ Proven solution in international automotive and industrial markets
- ✓ Excellent balance of toughness and wear resistance

Typical applications

- Automotive HPDC dies
- Non-automotive die casting
- LPDC dies
- Long-life production tooling
- Applications requiring increased wear resistance

SWG EX7 VICTORY ESR

Reliable performance at elevated temperatures

Tool steel with excellent high-temperature strength, tempering resistance and hot-wear resistance.

Your benefits

- ✓ Stable performance at elevated operating temperatures
- ✓ Excellent resistance to softening
- ✓ Good wear resistance
- ✓ Consistent operation for an extended service life

Typical applications

- LPDC
- CPDC
- Gravity Casting
- Brass casting
- Casting of heavy metal alloys

SWG EX1 VICTORY ESR

Designed to minimize thermal fatigue and maintenance requirements

Super-clean high-performance tool steel according to NADCA Grade C with advanced heat resistance and thermal shock resistance for extended mold life under severe casting conditions.

Your benefits

- ✓ Reduced thermal fatigue cracking and heat checking
- ✓ Lower maintenance requirements
- ✓ Longer die life
- ✓ Excellent performance in thin-wall castings
- ✓ Reliable dimensional accuracy in demanding applications

Typical applications

- Thin-wall castings
- High-load die casting applications
- Components with demanding tolerances
- Dies exposed to severe thermal cycling

SWG EX8 VICTORY ESR

Maximum security against cracking in large structural dies

Super-clean high-performance hot-work steel with exceptional toughness, cleanliness and microstructural homogeneity.

Your benefits

- ✓ Outstanding resistance against crack initiation and propagation
- ✓ Increased operational reliability in highly loaded dies
- ✓ Superior cleanliness and homogeneity through ESR technology
- ✓ Enhanced security in critical cross-section transitions
- ✓ Optimized for large and highly stressed tooling

Typical applications

- Large structural dies
- Mega-casting applications
- Giga-casting applications
- Large die inserts
- Critical tooling components exposed to extreme loads

SWG GPM58 VICTORY ESR

Maximum wear resistance for critical die components

High-performance hot-work tool steel designed for applications where erosion, wear and elevated temperatures determine tool lifetime.

Your benefits

- ✓ Extended service life of wear-critical components
- ✓ Reduced maintenance frequency
- ✓ Outstanding resistance against wear
- ✓ Reliable performance under severe wear conditions
- ✓ Excellent performance in moving die components
- ✓ Hardness potential up to 58 HRC
- ✓ High temperature capability

Typical applications

- Sliders
- Wear-critical inserts
- Zinc die casting
- Components exposed to severe erosion

SWG EX55 VICTORY ESR

Engineered for extreme thermal loads

Exclusively produced for our authorized Chinese distributor and pioneer partner Hua Xing Long (HXL)

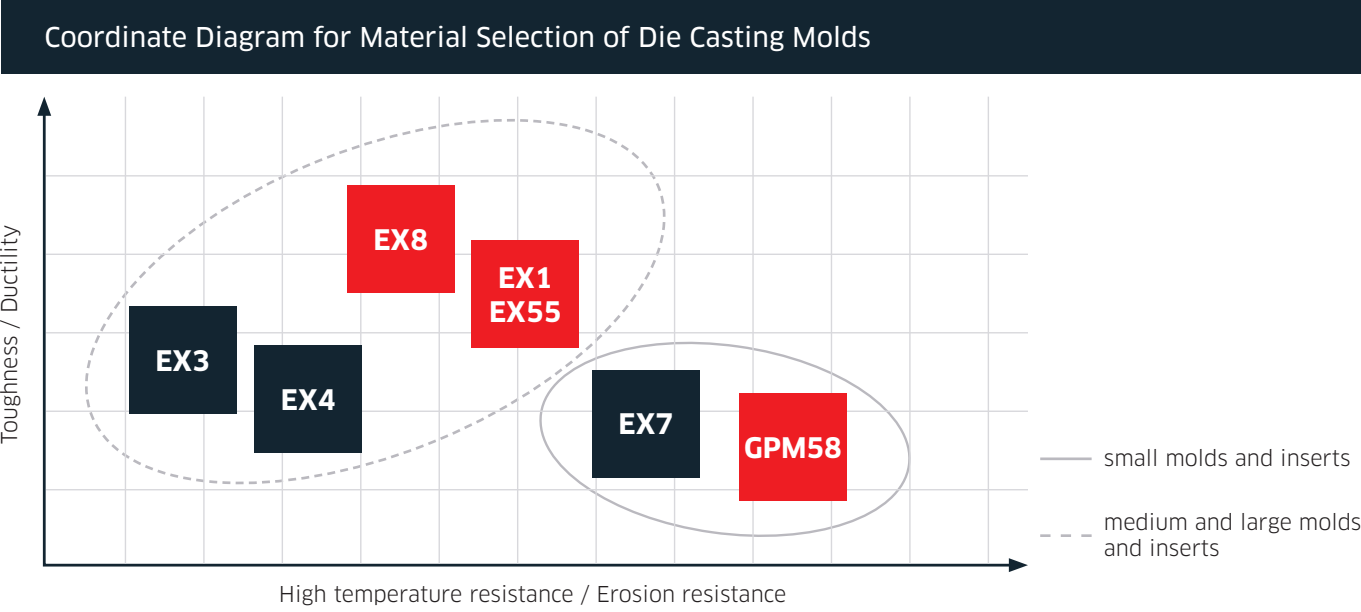
High-performance hot-work tool steel according to NADCA Grade C developed for die casting applications exposed to severe thermal shock and very high operating temperatures.

Your benefits

- ✓ Distinguished resistance to thermal shock
- ✓ Enhanced performance under extreme temperature exposure
- ✓ Extended die life in demanding applications
- ✓ Reduced downtime and maintenance
- ✓ Consistent performance in highly loaded tooling

Typical applications

- Large aluminum die casting dies
- Structural casting applications
- High-load HPDC tooling
- Applications requiring maximum thermal stability



READY-TO-USE MATERIAL SOLUTIONS

For LPDC and Gravity Casting applications, Schmiedewerke Gröditz can supply bars and blocks directly at application hardness.

Your benefits:

- ✓ Reduced lead times
- ✓ Lower processing costs
- ✓ No external heat treatment required
- ✓ No distortion risk during external heat treatment
- ✓ Improved machinability
- ✓ Reliable hardness levels
- ✓ Steel and heat treatment from one source

Applications include wheel rim molds, motor carriers, structural automotive castings and EV chassis components.

SUSTAINABLE BY DESIGN

Produced through an electric arc furnace route using recycled steel, Schmiedewerke Gröditz tool steels combine premium performance with a significantly reduced CO₂ footprint.

SCHMIEDEWERKE GRÖDITZ

Strength that Lasts

- ✓ German-engineered quality
- ✓ Premium ESR die casting tool steel
- ✓ One of the world's largest ESR capacities
- ✓ 6000 t forging capability
- ✓ Ready for mega- and giga-casting
- ✓ Designed for longer die life
- ✓ Strong local support in China

The metallurgical foundation of modern die casting.





Schmiedewerke Gröditz GmbH
Riesaer Straße 1
01609 Gröditz | Germany
www.gmh-gruppe.de

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