utp maintenance
by voestalpine

Tailor-Made Protectivity™ Welding Solutions for the Mining Industry

voestalpine Böhler Welding
www.voestalpine.com/welding

voestalpine
ONE STEP AHEAD.

voestalpine Böhler Welding

Metallurgical Expertise for Best Welding Results

voestalpine Böhler Welding (formerly Böhler Welding Group) is a leading manufacturer and worldwide supplier of filler materials for industrial welding and brazing applications.

As a part of the voestalpine Group, Austria's largest steel manufacturer and one of the world's leading suppliers of specialized steel products, we are a part of a global network of metallurgy experts.

Our customers benefit from:

- Comprehensive welding and steel know-how under one roof
- Coordinated complete solutions comprised of steel and welding filler metals
- A partner offering maximum economic stability and technological expertise

Customer First

Absolute customer focus is our guiding principle. We see ourselves as a provider of solutions to challenging welding projects. We ensure that our customers get the right filler metals, use them correctly, and that all welding process parameters are adjusted for the best possible performance. We consider it as our responsibility to guarantee that we deliver to our customers, now and in the future, the best possible solutions. We also strive to develop new products, optimize existing products, and streamline processes so as to achieve very short turnaround times. We focus on technologically advanced industrial sectors and provide products that are geared to their specific requirements.

Three Competences – Three Brands

In our efforts to afford our customers the best possible support and promote development in line with specific targets, we have built our core competences within Joint Welding, Repair & Maintenance Welding and Soldering & Brazing.

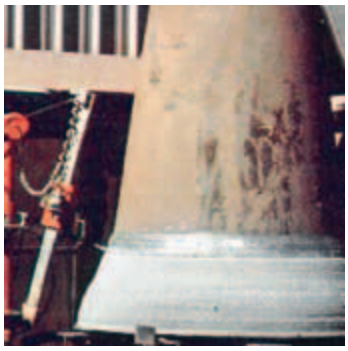
This way we offer our customers the largest and most comprehensive product portfolio of filler materials within our three brands:

- Böhler Welding
- UTP Maintenance
- Fontargen Brazing

Join Expertise –
Don’t let your productivity wear down

To provide solutions for the Mining industry is a special competence of voestalpine Böhler Welding. We offer you a wide range of long-life filler metals that help you increase productivity and optimize maintenance, repair, wear and surface protection. Rely on:

- Tailored products to the exact needs of the Mining industry
- Consistently high product quality
- Worldwide distribution and a global service network
- Individual technical support by application specialists and welding engineers
- Decades of experience and application know-how in the Mining industry



Hardfacing Of Gyratory Crushers
SK AP-O
SK 255-O
SK 258TiC-O
SK A43-O
UTP BMC
UTP 630
UTP DUR 350
UTP DUR 600
UTP LEDURIT 61

Hardfacing Of Bucket Wheels
SK A70-G
SK A43-O
SK A43-OB
SK 299-O
SK 258TiC-O
SK 674-O
UTP DUR 650 Kb
UTP LEDURIT 61
UTP 7100
UTP ABRASODUR 43+
UTP LEDURIT 65
UTP DIADUR HR
UTP ABRADISC 6000

Hardfacing Of Rails & Wagon Wheels
SK AP-O
SK 402-O
SK 350-O
UTP BMC
UTP 630
UTP DUR 350

Hardfacing Of Crusher Hammers
SK AP-O
SK 258TiC-O
UTP BMC
UTP 63
UTP DUR 350
UTP DUR 650 Kb
UTP ABRASODUR 43+
UTP LEDURIT 61

Hardfacing Of Wheel Loader Buckets
SK A70-G
SK A43-O
SK A43-OB
SK 299-O
SK 258TiC-O
SK 674-O
UTP LEDURIT 61
UTP 7100
UTP ABRASODUR 43+
UTP LEDURIT 65
UTP ABRADISC 6000

Hardfacing Of Wheels & Chains Of Earth Moving Machines
SK AP-O
SK 402-O
SK 350-O
SK 650-G
UTP BMC
UTP 63
UTP 630
UTP DUR 350
UTP DUR 600
UTP DUR 650 Kb

	Typical hardness	Products by welding process SMAW	FCAW	Description
Rebuilding of buffer layer / High impact low abrasion	200 - 260 HB / 45 HRC - 550 HB	UTP BMC	SK AP-O/G/S	All purpose alloy, rebuilding and joining of carbon and 14% Mn steel, buffer layer prior to deposit hard overlay / High rate of work-hardening. For rebuilding of parts subject to high compression and impact in combination with abrasion. Rebuilding on manganese steel parts. APPLICATIONS: Railway rails and crossover, buffer layer for inter particles crusher, gyratory crusher mantles …
	240 HB / 50 HRC		SK 624-O	High Chromium - Manganese alloy enriched with Niobium, designed to resist abrasion and solid erosion wear combined with heavy impact. APPLICATIONS: crusher hammers, gyratory crusher mantles, crusher cylinder, automobile shredder hammers.
	285 HB		SK BU-O/G/S	All purpose alloy, rebuilding of carbon steels, buffer layer prior to deposit hard overlay. APPLICATIONS: Buffer layer for continuous casting rollers, mine car wheels, shaft …
	370 HB	UTP (A) DUR 350	SK 350-O/G/S	Wear resistant rebuilding of parts subject to high pressure in combination with rolling and gliding wear / Rebuilding and hardfacing alloy for carbon steel. APPLICATIONS: Medium hard build-up.
	200 HB / 400 HB	UTP (A) 63 / UTP 630	SK 402-O/G/S	For tough, crack resistant buffer layers and rebuilding prior to hard surfacing tending to hardness cracks. APPLICATIONS: Joining for wear plates on shovel bucket, rebuilding of rails …
Low impact and low abrasion	55-58 HRC	UTP(A) DUR 600 UTP (A) DUR 650 Kb	SK 600-G / SK 650-G	Premium martensitic steel alloy designed for welding in horizontal and vertical-up positions under gas shielding. Its resistance to friction and low stress abrasion wear with moderate impact is excellent. APPLICATIONS: Bucket teeth, gravel pumps, conveyor chains, sliding metal parts, gear teeth, crusher hammers, rock drills.
Low impact and high abrasion	70 HRC		SK ABRAMAX--O/G	New development available with borocarbides in austenitic matrix and complex carbides designed to resist to very high stress abrasion at high temperature up to 750°C.
	63 HRC 62 HRC		SK 164 WP-O SK 867 WP-O	Wear plates
	60 HRC 60 HRC 63 HRC	UTP LEDURIT 60 UTP LEDURIT 61 UTP 7100	SK 255-O / SK 866-O SK 256-O / SK 164-O	High chromium carbide alloy designed to resist high stress grinding abrasion coupled with low impact. The deposits will readily show stress relief cracks / Rebuilding of parts subject to strong mineral abrasion and moderate impact. APPLICATIONS: Vertical mill,Palm oil expeller screws, cement conveyor screws, dredge pump impeller, dredge cutters, shovel bucket teeth …
	63 HRC	UTP Abrasodur 43 +	SK A43-O/S	Chromium-Niobium alloy designed to resist high stress grinding abrasion at service temperature not exceeding 450°C. The deposits will readily show stress relief cracks. APPLICATIONS: groundnut oil expeller screws, screen in the coal industry, bucket teeth, conveyor screws,
	65 HRC		SK A43-OB	Special Chromium-Niobium-Boron alloy designed to give extreme resistance to high stress and gouging abrasion and achieve a very high hardness in one pass deposits. APPLICATIONS: Bucket teeth in coal and phosphate mines, brick and clay mill augers, wear plates and screen in the coal industry.
	63 HRC		SK 299-O	Austenitic matrix with complex carbides designed to surface parts subject to high stress grinding abrasion without impact at higher temperature (up to 650°C). APPLICATIONS: Sinter plant bars, Chutes, conveyor screws, mixers, shovel bucket parts working in sand clinker crusher.
	67 HRC		SK A70-G	Special Chromium-Niobium-Boron alloy designed to give extreme resistance to high stress abrasion without impact. The typical hardness is achieved in the first layer. APPLICATIONS: Periphery and leading flight on augers working ceramic plants.
	61 HRC		SK 795-O	Medium carbide alloy designed primarily for heavy build-up using automatic processes. APPLICATIONS: dredge pump shells, gyratory crusher mantles and bowls.
	61 HRC		SK 674-O	Chromium-Niobieum alloy with addition of Molybdenum, Tungsten and Vanadium designed to resist high stress grinding abrasion and solid erosion at temperatures up to 600 - 650° C. APPLICATIONS: Wear plates, fan blades, screens, blast furnace burden area, chutes.
	65 HRC	UTP 75		Graphite basic coated electrode with sintered core wire on tungsten- carbide base against extreme mineral abrasion. APPLICATIONS: Mixer blades,earth drills,teeth and bars of grades, buckets and shovel teeth.
	63-65 HRC	UTP LEDURIT 65		Excellent wear resistance to fine abrasive particles of high hardness. Working temperature up to 500°C. APPLICATIONS: Surfacing on earth moving equipment,scraper bars, wear bars and plates.
	63 HRC	Diadur HR	SK 900-O	The cored wire containing about 60% and the electrode about 45% Tungsten carbide particles. The composition and particle size have been optimized to provide the best combination of toughness and wear resistance. The deposits will readily show stress relief cracks. APPLICATIONS: Bucked teeth for wheel bucked excavators in phosphates mines, concrete mixer blades, brick and clay mill augers, crusher rollers, wood chipper spouts and bed knives.
High impact and high abrasion	58 HRC		SK 258 TIC-O/G	Martensitic chromium-Titanium alloy designed to resist high stress abrasion with heavy impact. Deposits usually do not show stress relief cracks. APPLICATIONS: Crusher rollers, crusher hammers, asphalt mixer blade, agricultural tools, shovel bucket teeth and lips, bulldozer blades, cane knives and shredders, bed knives in the wood pulp industry.
General repair and nickel base	50 HRC		SK 900Ni-G	Flux cored wires containing about 45% Tungsten carbides particles, incorporated in a matrix alloyed with CrNiB. This composition has been optimized for the best possible combination of toughness and wear resistance. APPLICATIONS: Excavation in phosphate mines, brick and clay mill augers, wood chippers' spout and bed knives in the paper industry and crusher rollers.
	220 HB	UTP 86 FN	SK FN-O/G	Ferro- Nickel alloy designed APPLICATIONS: Joining and surfacing of grey cast iron and spheroidal cast iron.
	170 - 220 HB	UTP (A / AF) 068HH	SK NiCr3-G	Nickel base alloy used for dissimilar joints, for joining of heat resistant steels and for joining and repair of steels with limited weldability. For critical repairs with working temperature up to 900°C. No need to preheat.
	240 HB	UTP 65		Austenitic ferritic deposit for joining of unknown or hard to weld steels, and for dissimilar joints, good crack resistance. APPLICATIONS: Repair and maintenance of machine and drive components, joinings of hardly weldable steels

Legend: O: open arc, G: gas shielded, S: submerged arc (SAW), A: solid rods & wires (GTAW/GMAW), no letter: stick electrodes

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voestalpine Böhler Welding

Welding know-how joins steel

Customers in over 120 countries join the expertise of voestalpine Böhler Welding. Focused on filler metals, voestalpine Böhler Welding offers extensive technical consultation and individual solutions for industrial welding and soldering applications. Customer proximity is guaranteed by 40 subsidiaries in 28 countries, with the support of 2,200 employees, and through more than 1,000 distribution partners worldwide. voestalpine Böhler Welding offers three specialized and dedicated brands to cater our customers' and partners' requirements.

böhler welding by voestalpine

Böhler Welding – More than 2,000 products for joint welding in all conventional arc welding processes are united in a product portfolio that is unique throughout the world. Creating lasting connections is the brand's philosophy in welding and between people.

utp maintenance by voestalpine

UTP Maintenance – Decades of industry experience and application know-how in the areas of repair as well as wear and surface protection, combined with innovative and custom-tailored products, guarantee customers an increase in the productivity and protection of their components.

fontargen brazing by voestalpine

Fontargen Brazing – Through deep insight into processing methods and ways of application, Fontargen Brazing provides the best brazing and soldering solutions based on proven products with German technology. The expertise of this brand's application engineers has been formulated over many years of experience from countless application cases.

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