VAUTID offers a custom-tailored and cost-efficient solution for every requirement. Cast products are manufactured in accordance with customer needs using a wide variety of materials and casting methods. Optimized geometry combined with additional wear protection is a valuable asset in many applications.

Advantages. VAUTID cast components represent the most cost-efficient method of wear prevention for mass production. Cast products can range in weight from 2 to 30,000 kg depending on the field of application and the type of material. Applications include sand casting, ceramic or Croning molds or lost foam casting. Models, computer simulations and extensive analyses ensure the optimal quality of each component. VAUTID cast products can also be machined directly in the plant to the desired level of precision.

Highly wear-resistant VAUTID components offer the most advanced wear protection for both original and replacement equipment from an innovation leader.

VAUTID casting provides cost-efficient wear protection for series parts

Fields of application. VAUTID hard casting offers highly streamlined production and high-quality wear protection through strict VAUTID quality controls and is ideal for use in a wide variety of industries that contain mechanical processes like crushing, mixing, conveyance, storage, agglomeration, and separation.

VAUTID foundries

VAUTID is an experienced partner in component manufacturing for high carbon and stainless steel casting. VAUTID cast products are manufactured and processed in accordance with customer specifications.

VAUTID casting process

VAUTID wear resisting casting for the concrete industry

green sand
furan resin sand
furan resin sand
furan resin sand
green-/furan resin sand
furan resin sand
sand

Lot sizes

1 to 150.000/a

Casting weights

2 – 30.000 kg

- Own heat treatment at all locations
- Own lab for melting analysis and material tests at all locations
- VAUTID wear-test lab

Quality control

Testing possibilities

- Verify of dimensional accuracy
- Chemical Analysis
- Hardness (HB, HRC, HV)
- Microstructure
- Tensile strength
- Elongation
- Impact bending strength
- Magnetic powder testing method
- Ultrasonic testing
- Wear tests
- Calcination test
- Destroying test

Bi-metal hammer

Grate bars in waste incineration

Crawler elements on excavator for open pit mining

Glass recycling; impact crusher for crushing of ceramics

Mechanical Properties [a]				Condition of delivery	Weldability	Applications	Forms of stress
longation after ture (Lo=5d) min.	Hardness acc. HB (HRC)	KV ISO-V Trial J min.	Temperature °C				
25	130 – 140	27	RT	N	good	for mechanical engineering and steel structural work	
22	140 – 170	27	RT	N	good	for mechanical engineering and steel structural work	
18	150 – 190	31	RT	N	good	for mechanical engineering	
24	130 – 190	27 / 70	– 40 / RT	QT	good	for pressure vessel	
10 – 18	150 – 190	27 – 35	RT	N, QT1, QT2	good	for mechanical and plant engineering	
10 – 16	160 – 250	18 – 40	RT	QT1, QT2	preheating + after heat treatment	for mechanical and plant engineering	
10 – 12	180 – 250	16 – 35	RT	QT1, QT2	preheating + after heat treatment	for mechanical and plant engineering	
10 – 12	190 – 290	16 – 31	RT	QT1, QT2	preheating + after heat treatment	for mechanical and plant engineering	
22	120 – 190	27 – 40	RT	N, QT	good	for pressure vessel	
20	140 – 200	27	RT	QT	preheating + after heat treatment	for turbins, pressure vessel, steam boiler	
15	220 – 280	27	RT	QT	preheating + after heat treatment	for pressure vessel	
–	min. 42 HRC	–	–	QT	limited	for hammer in the size reduction technics	
–	min. 48 HRC	–	–	QT	limited	for hammer in the size reduction technics	
–	–	–	–	AT	good	for crusher jaw, crushing cone	from to 
–	–	–	–	AT	good	for crusher jaw, crushing cone	
–	–	–	–	AT	good	for crusher jaw, crushing cone	
–	max. 300	–	–	Wb4 / 800 – 850	preheating + stress relieve heat treatment	for industrial furnace engineering up to 850 °C on air	from to 
–	d	–	–	G	preheating + stress relieve heat treatment	for industrial furnace engineering up to 900 °C on air	
–	d	–	–	G	preheating + coolant in furnace	for industrial furnace engineering up to 1.150 °C on air	
–	d	–	–	G	preheating + coolant in furnace	for stirring teeth up to 1.100 °C on air	
3	d	–	–	G	good	for industrial furnace engineering up to 1.100 °C on air	
15	–	–	–	G	good	for industrial furnace engineering up to 900 °C on air	
8	–	–	–	G	good	for industrial furnace engineering up to 950 °C on air	
6	–	–	–	G	good	for industrial furnace engineering up to 1.150 °C on air	
8	–	–	–	G	good	for industrial furnace engineering, petroleum and natural gas plants up to 1.100 °C on air	
–	260 – 330	–	–	G	preheating + coolant in furnace	for food technique, chemical industry	
30	–	60	RT	AT	good	for accessories, mechanical engineering	
–	–	–	–	AT	good	for pump construction	
16 – 18	–	40 – 45	RT	AT	good	for pressure vessel	
40	–	–	RT	AT	good	for pressure vessel	
–	230 – 300	–	–	G	preheating + heat treatment	for chemical industry, flue gas desulfurization	
22	–	50	RT	AT	good	for pressure vessel, chemical industry	
20	–	60	RT	AT	good	for pressure vessel	
25	–	40	RT	AT	good	for pressure vessel, chemical industry	
25	–	40	RT	AT	good	for pressure vessel, chemical industry	

he appropriate standard.

d = Castings can be delivered also in an annealed condition: In this case a maximum value of the hardness can be arranged.

RT = room temperature, N = normalising, G = as cast, QT, QT1, QT2 = quenched and tempered, AT = solution annealing

Mechanical Properties [b]				Condition of delivery	Weldability	Applications	Forms of stress
E-Modul [kN/mm²]	Hardness (HRC)	Fracture toughness Kic [kN/mm²]	Machinability				
–	min. 52	–	–	QT	limited	for impact crusher	
–	min. 55	–	–	QT	limited	for impact crusher	
–	min.55	–	–	QT	limited	for impact crusher, rotary crusher	
–	min. 42	–	–	QT	limited	scrap metal crusher and shredders	
–	approx. 52	–	–	G	not allowed	abrasion stressed castings	from to 
–	approx. 55	–	–	G/hardened	not allowed	abrasion and impact stressed castings	
165 – 180	approx. 58	–	no	G	not allowed	for linings, mixer tools	
165 – 180	approx. 52	–	no	G	not allowed	for linings, mixer tools	
158 – 190	approx. 59	25 – 31	yes	hardened	not allowed	for pump elements, hammer	
158 – 190	approx. 59	25 – 31	yes	hardened	not allowed	for pump elements, hammer	
158 – 190	approx. 59	25 – 31	yes	hardened	not allowed	for impact bars, hammer	
158 – 190	approx. 59	25 – 31	no	hardened	not allowed	for impact bars, hammer	
158 – 190	approx. 62	–	no	hardened	not allowed	for impact bars, linings	
150 – 170	approx. 59	25 – 31	no	G	not allowed	for brick industry	

netry and cross section of components

G = as cast

Mixing

Mixer blade for planet mixer

Mixing tools for double-shaft mixer

Conveying

VAUTID S-tube