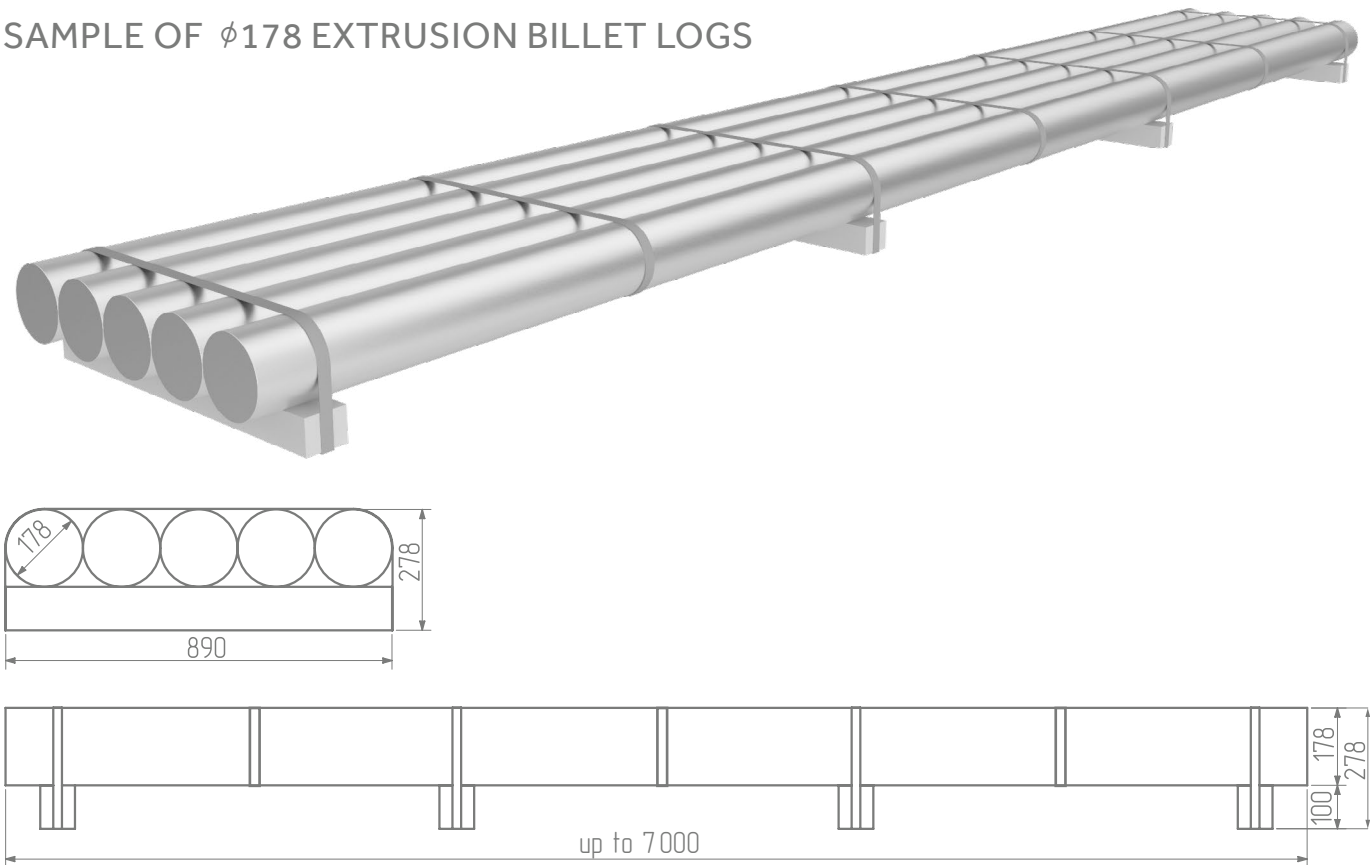


BILLETS FOR EXTRUSION AND FORGING

SAMPLE OF $\phi 178$ EXTRUSION BILLET LOGS



The packaging is based on billet diameter and length. Typical $\phi 178$ bundle

ALLOY SERIES 6xxx (6060, 6063, 6005, 6005A, 6061, 6082, 6106,6463), 1xxx

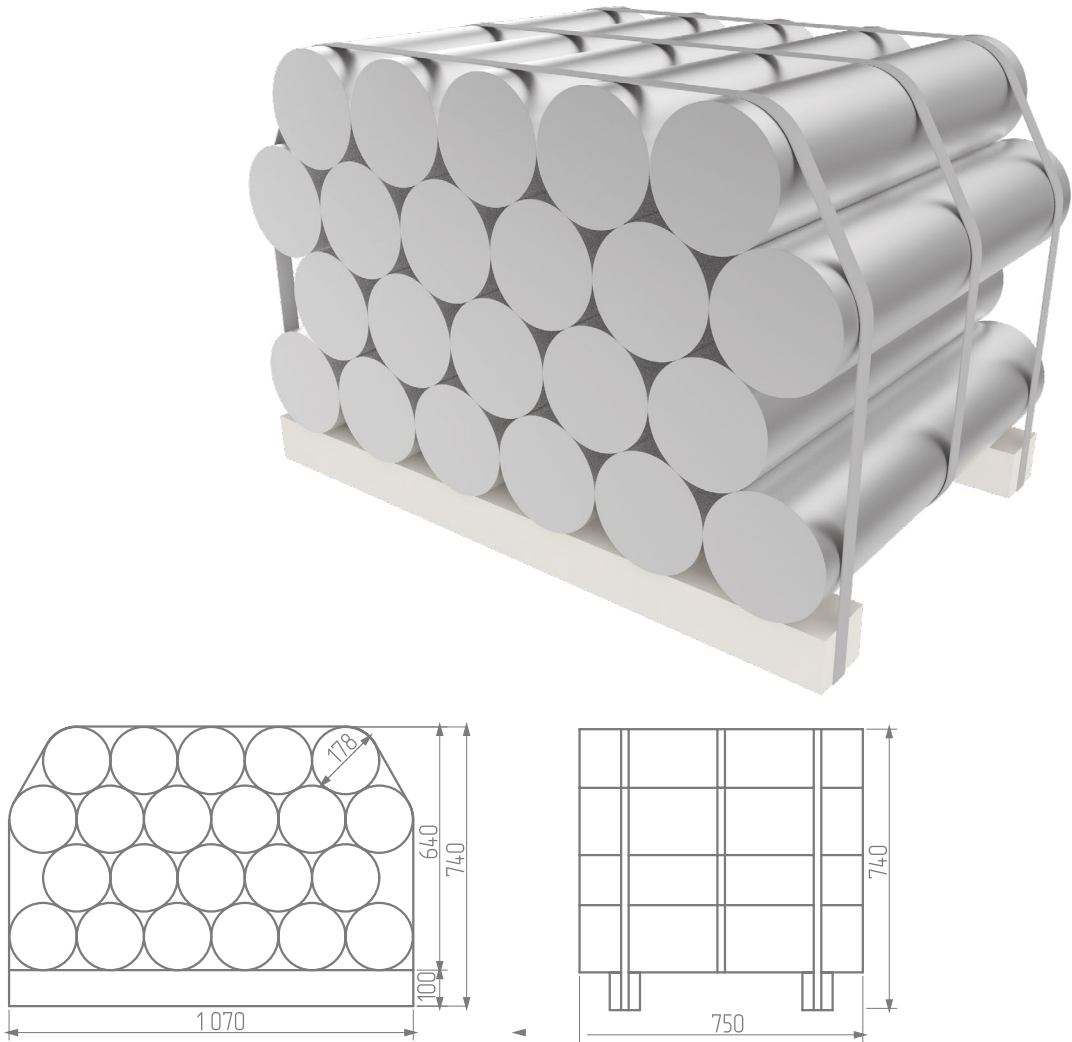
Cut to length or logs
6xxx homogenized
1xxx non-homogenized
Tested by ultrasonic control

Producer:
Kubal (Sweden), Novokuznetsk,
Sayanogorsk, Volgograd,
Krasnoyarsk

Plant	Diameters, mm
Sayanogorsk	152, 178, 203, 228, 254
Novokuznetsk	127, 145, 152, 155, 162, 178, 190, 203
Kubal	152, 178, 203, 228
Volgograd	127,145, 152, 178, 190, 203
Krasnoyarsk	203, 254, 279, 304.5, 355.4, 406, 457

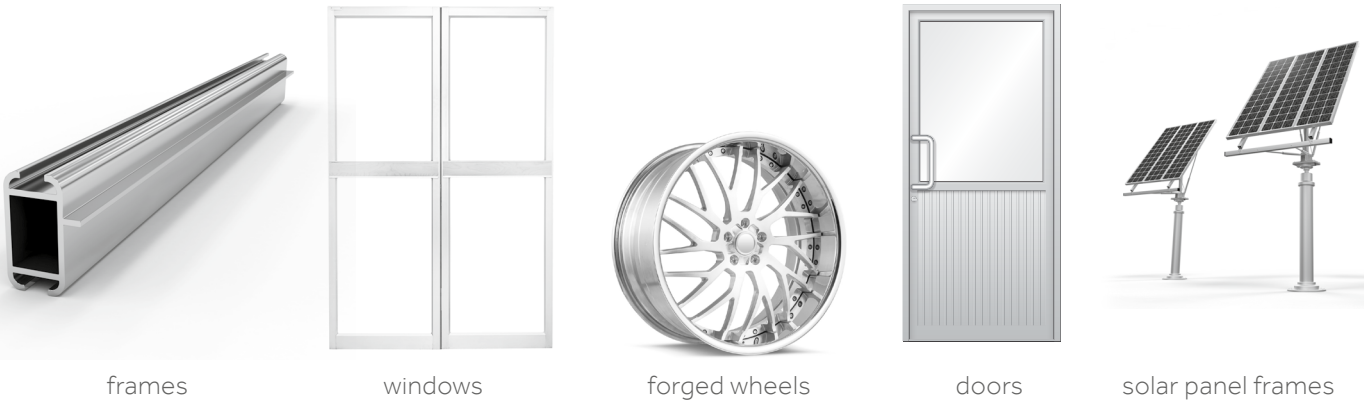
BILLETS FOR EXTRUSION AND FORGING

SAMPLE OF $\phi 178$ EXTRUSION BILLET CUT INTO 0.75 M LENGTH



Typical bundle of $\phi 178$ billet cut into 750 mm length

APPLICATIONS



frames

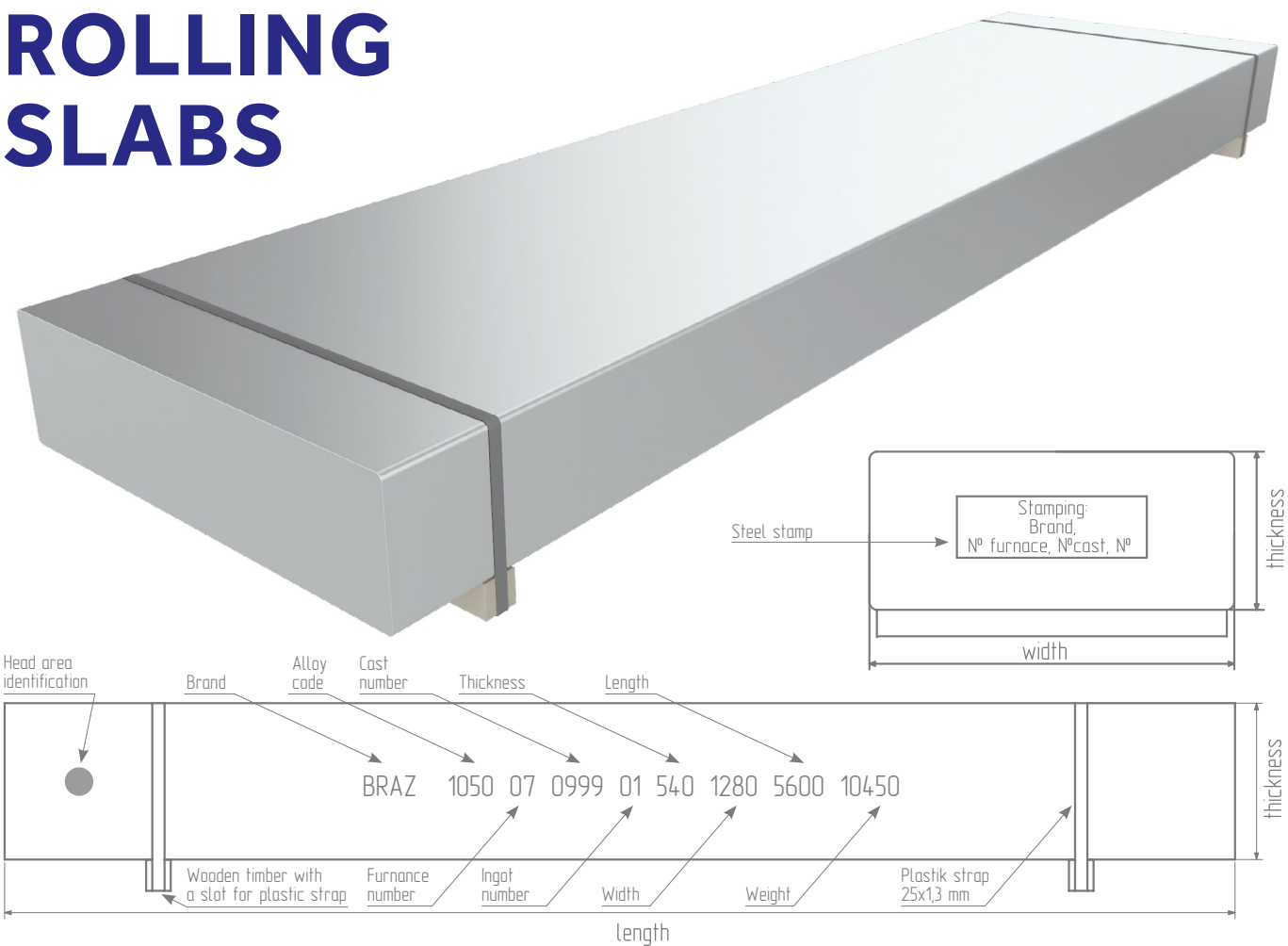
windows

forged wheels

doors

solar panel frames

ROLLING SLABS



ALLOY SERIES: 1xxx, 3xxx, 4xxx, 5xxx, 6xxx, 8xxx

Double length casting capability:
up to 10' 500 mm of cast length

Advanced quality control
and assurance:

- Tilting furnaces
- Magnetic stirrers;
- HD-2000 and RGI/RFI metal treatment;
- SNIF degassing equipment;
- CFF, PTF and DBF filtration;
- PODFA and LIMCA metal cleanliness control.
- Wagstaff casting system (Epsilon/LHC)
- Sawing facility

Producing plants:
Bratsk,
Krasnoyarsk,
Sayanogorsk,
Kubal (Sweden)

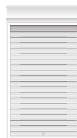
APPLICATIONS



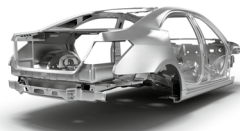
aluminium
foil



beverage cans



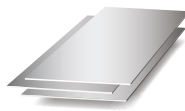
building & construction
applications (Venetian blinds,
roller shutters, ceilings etc.)



auto body structure



fin-stock



precision plates



kitchen utensils



litho product

ROLLING SLABS

AVAILABLE MOULD SIZES

Plant	Cut length	Dimensions, mm						
Bratsk	up to 6200 mm RUSAL mould	405x1560	406x1050	406x1300	500x1150	500x1330	500x1630	500x1800
		510x1060	510x1560	535x1315	540x1030	540x1530	540x1040	540x1280
		540x1540	555x1530	555x1540	560x1100	560x1230	560x1310	600x1150
		600x1330	600x1400	600x1630	600x1700			
	up to 9100 mm Wagstaff	560x1100	560x1230	560x1310	560x1410	560x1680	600x1400	600x1630
		600x1750	600x2000	711x1346				
Krasnoyarsk	up to 6100 mm RUSAL mould	190x590	190x690	270x650	300x1025	400x1260	500x1150	500x1330
		500x1560	510x1060	510x1560	560x1230	560x1400	560x1510	560x1630
		600x1330	600x1150	600x1560				
	Single length up to 5800 mm Double length up to 9100 mm Wagstaff	500x1800	560x1510	560x1520	560x1630	600x1200	600x1330	600x1450
Sayanogorsk	up to 7000 mm Wagstaff	340x1270	405x1560	406x1050	406x1300	560x950	560x1230	560x1310
		560x1410	560x1520	560x1920	560x2000	560x2050	575x1100	600x1070
		600x1350	600x1450	600x1560	600x1750			
	up to 6800 mm Wagstaff	500x2130	535x1670	560x1310	560x1330	560x1410	560x1520	560x1920
		560x2000	560x2050	600x1630	600x2200	609x2032		
Kubal	up to 4100 mm RUSAL mould	330x1300	330x1440	370x950	370x1050	370x1150	370x1250	370x1300
		370x1440	400x1300	400x1440	460x1440	500x1440	525x1440	550x1440
		600x1440						

WIRE RODS

SPECIFICATION

Applications – drawn wire for Electrical & mechanical purposes, CONFORM conductors, steel deoxidizing + welding wire
Diameters 9.5 mm, 12 mm, 15 mm, 23 mm, 19 mm, 25 mm

Coil dimensions	KAZ	IRKAZ	BRAZ
Height, mm	850	850	850
Outer diameter, mm	<1480	<1420	<1350
Inner diameter, mm	570	550	550
Pallet size, mm	standart: 150x1480x1480 mm		
Coil net weight, kg	2000-2500	1850	1850



Eye-to-the sky
Eye-to-the wall

Producer:
Bratsk, Shelekhov (ex-Irkutsk), Kandalaksha

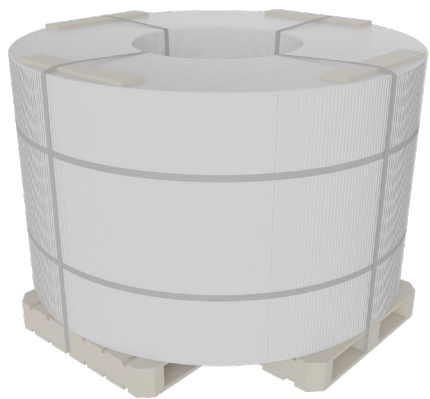
Grade	Tensile strength, MPa	Resistivity, Ohm*mm2/m max	Conductivity, % IACS min
EN 1715-2			
AW1080 - H11	80-95	0,02772	62,2%
AW1350AW/1370 - H11	80-95	0,02785	61,9%
AW1350AW/1370 - H12	95-110	0,02794	61,7%
AW1350AW/1370 - H13	105-120	0,02794	61,7%
AW1350AW/1370 - H14	115-130	0,0280	61,6%
AW6101-T4	150 min	0,03260	52,9%
AW8176 - F	100-150	0,02855	60,4%
AW8176 - O	60-110	0,02826	61,0%
TAL	110 min	0,02850	60,5%
ZTAL	120 min	0,02850	60,5%
AI59	135 min	0,02890	59,7%
DEOX	Various specs within 80-120 MPa	-	-
4043	100-140	-	-
3003	95-120	-	-
3103	95-115	-	-

WIRE RODS

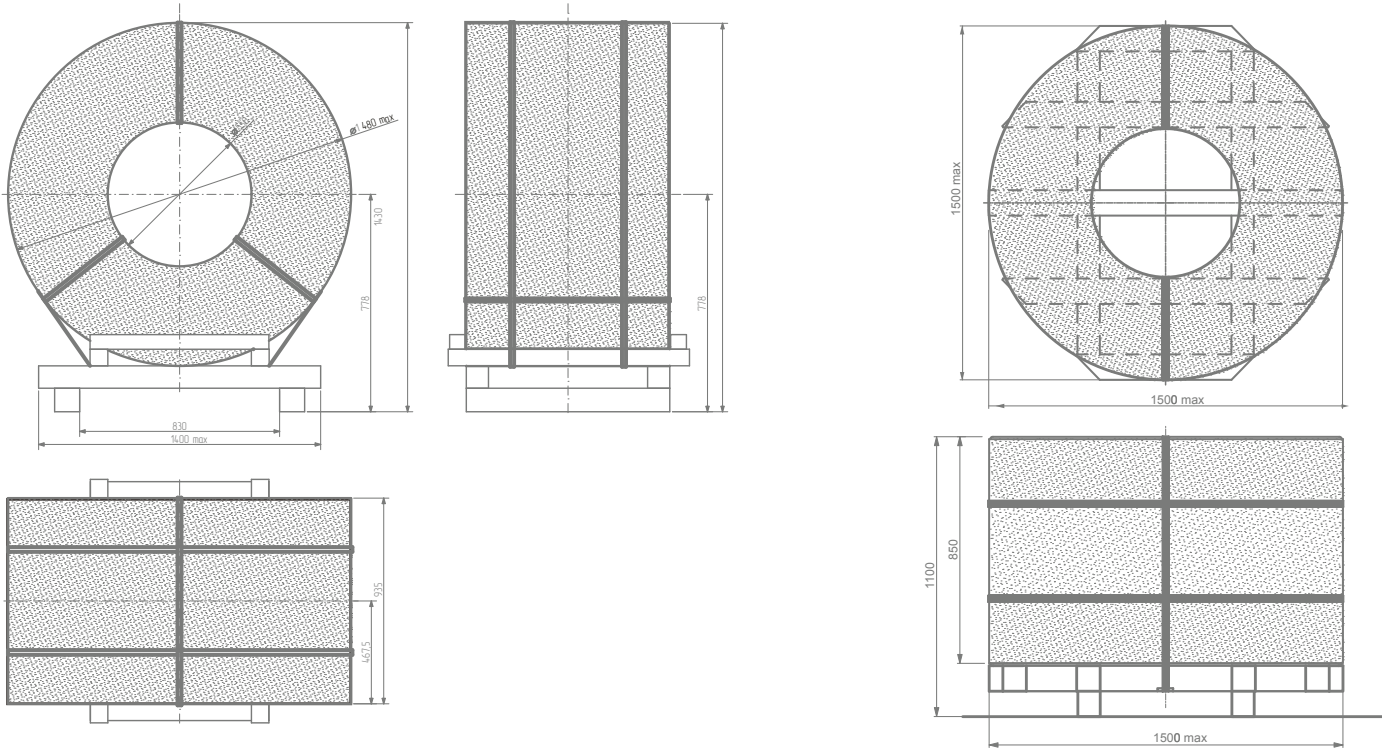
Sample
of wire rod
Eye-to-the wall



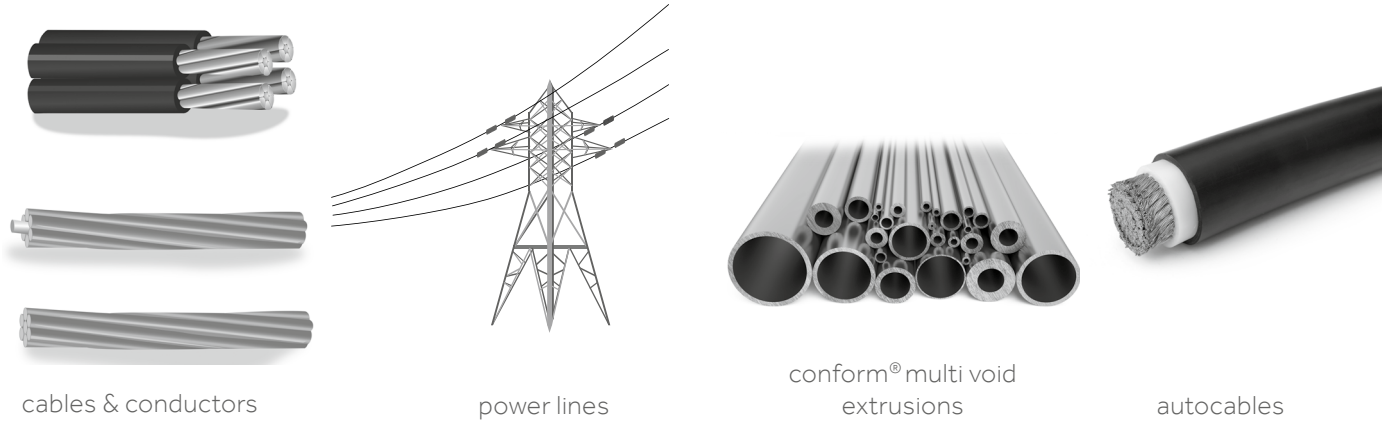
Sample
of wire rod
Eye-to-the sky



LAYOUT



APPLICATIONS

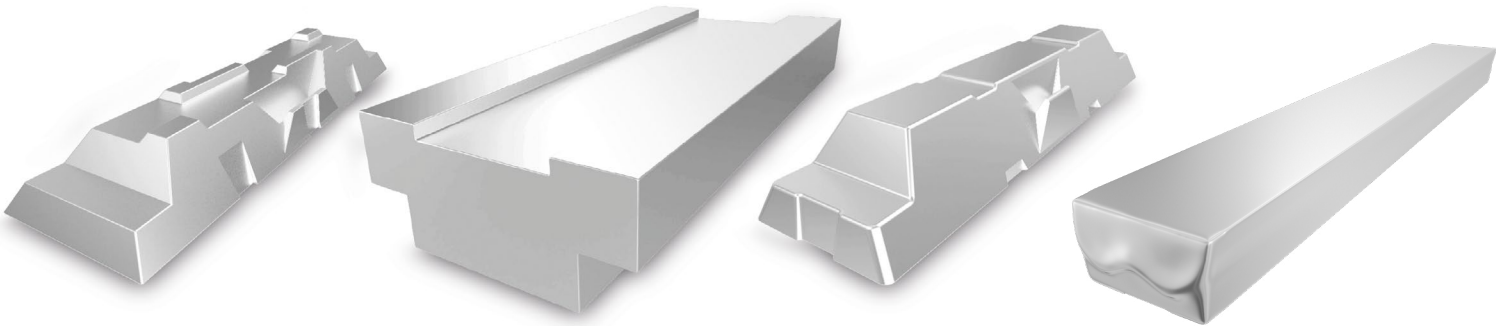


PRIMARY FOUNDRY ALLOYS

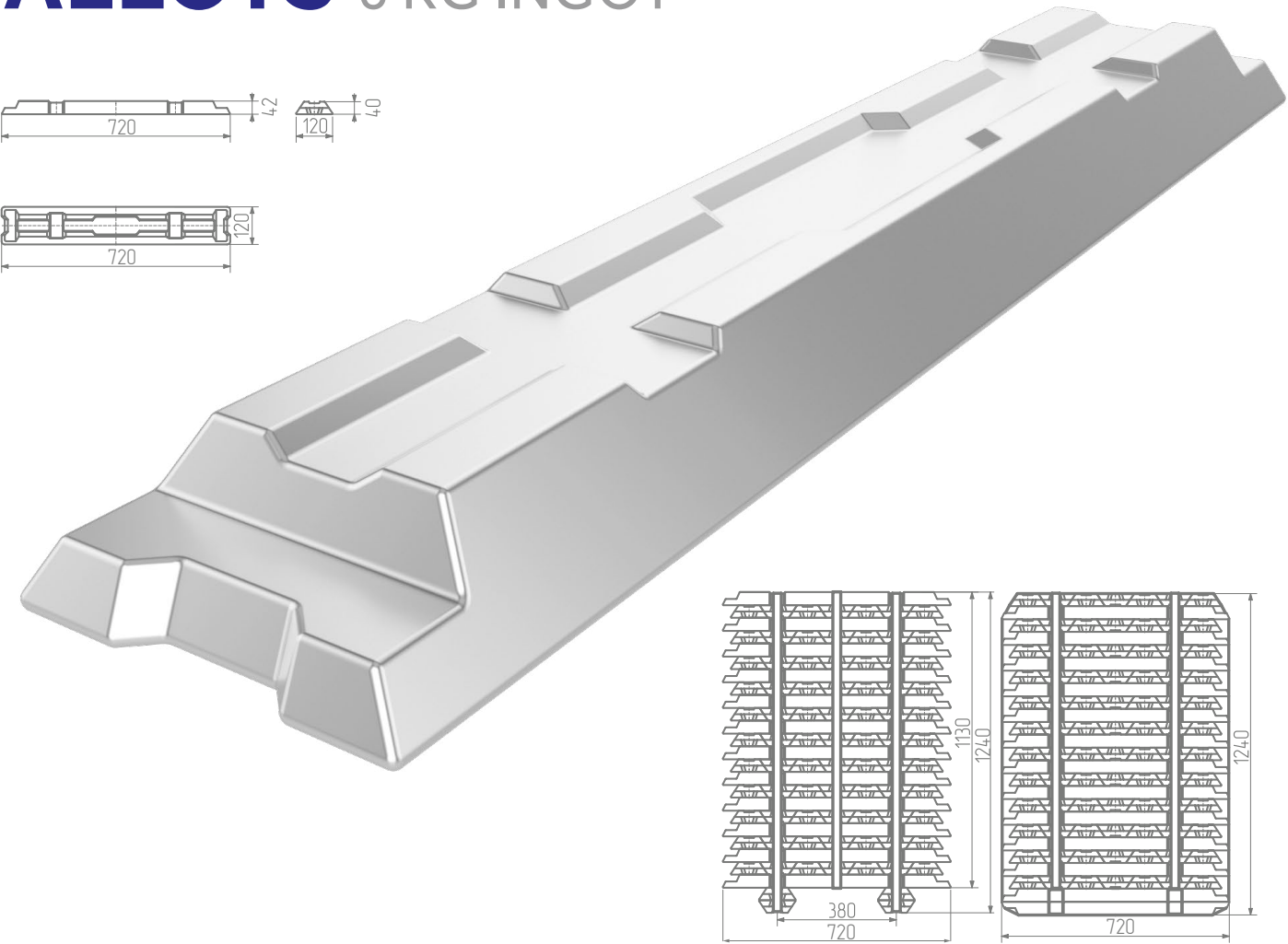
Alloys	6-7 kg	10 kg	15 kg	16 kg	Bar	T-bar	Sow/Jumbo
AlSi7Mg	x	x	x	x	x	x	
AlSi11Mg	x	x	x	x	x		
AlSiCu	x	x	x	x	x	x	
AlSi3						x	
Piston	x		x			x	
AlSiMgMn	x	x	x	x	x		
AlSi10	x	x	x				x

Producers: Shelekhov (ex-Irkutsk), Sayanogorsk, Krasnoyarsk, Novokuznetsk, Khakas.

SAMPLES OF PFA



PRIMARY FOUNDRY ALLOYS 6 KG INGOT



ALLOY SERIES AlSi7Mg, AlSi11Mg, AlSiCu, Piston, AlSiMgMn, AlSi10

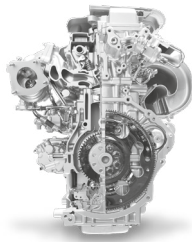
Sr-modified/non-modified
 Weight 6 kg +/- 1 kg
 Full and half bundles are available
 Regular bundle weight 1074 kg +/- 100 kg
 Half bundle weight 570 kg +/- 50 kg
 109 ingots in full bundle – Novokuznetsk

Packed in polyethylene wrapping
 with 5 steel or plastic straps respectively
 Highest Quality control standards (DI)
 Producer: Novokuznetsk

APPLICATIONS



wheels



engine

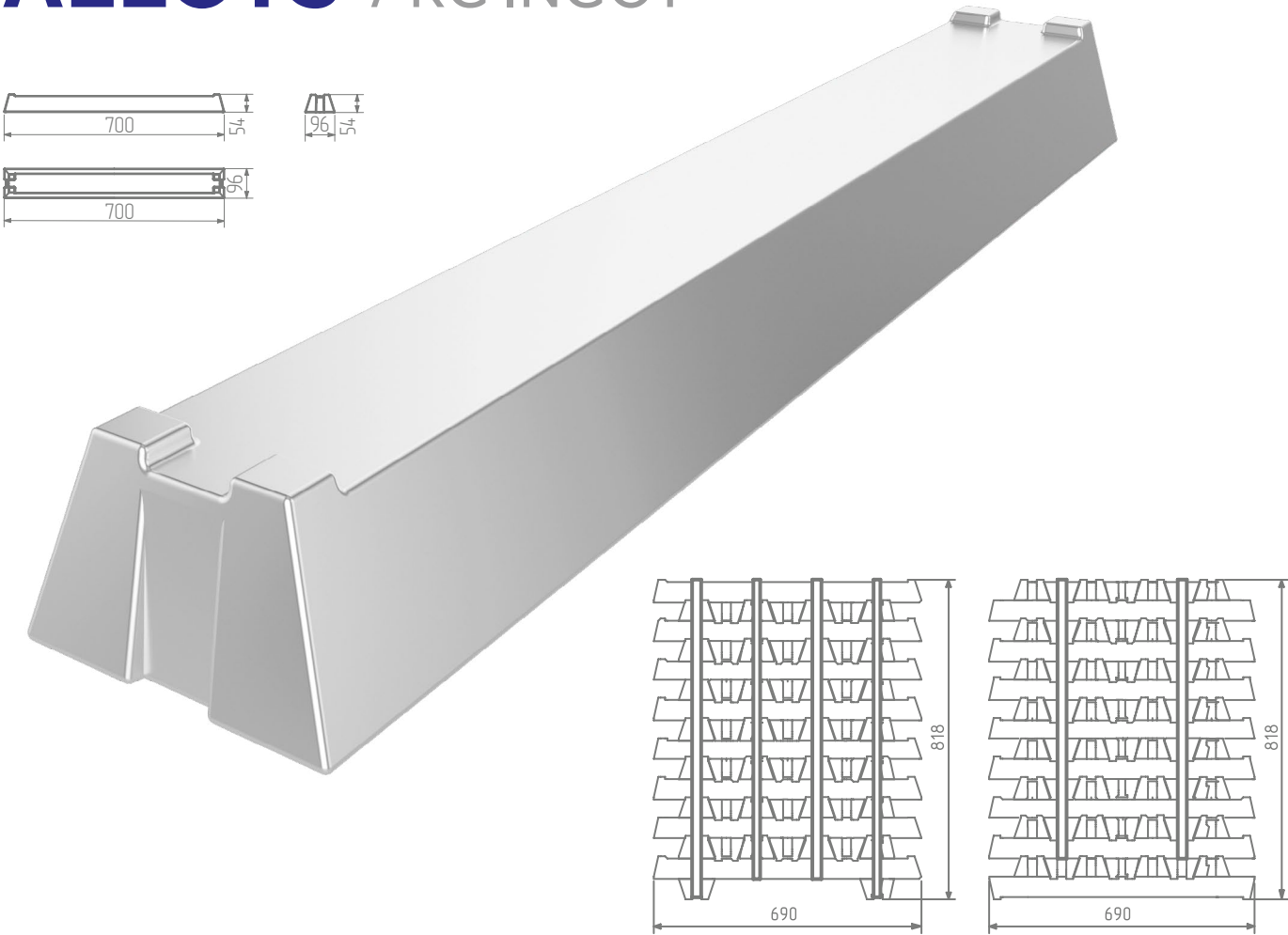


suspension parts



car parts

PRIMARY FOUNDRY ALLOYS 7 KG INGOT



ALLOY SERIES AISi7Mg, AISi11Mg, AISi10, AISi9Mg

Sr-modified/non-modified
Weight 7 kg +/- 1 kg
Bundle weight 550 or 750 kg +/- 70 kg
79 or 107 ingots per bundle

Packed in polyethylene wrapping
with 6 steel or plastic straps
Producer: Sayanogorsk

DID YOU KNOW?

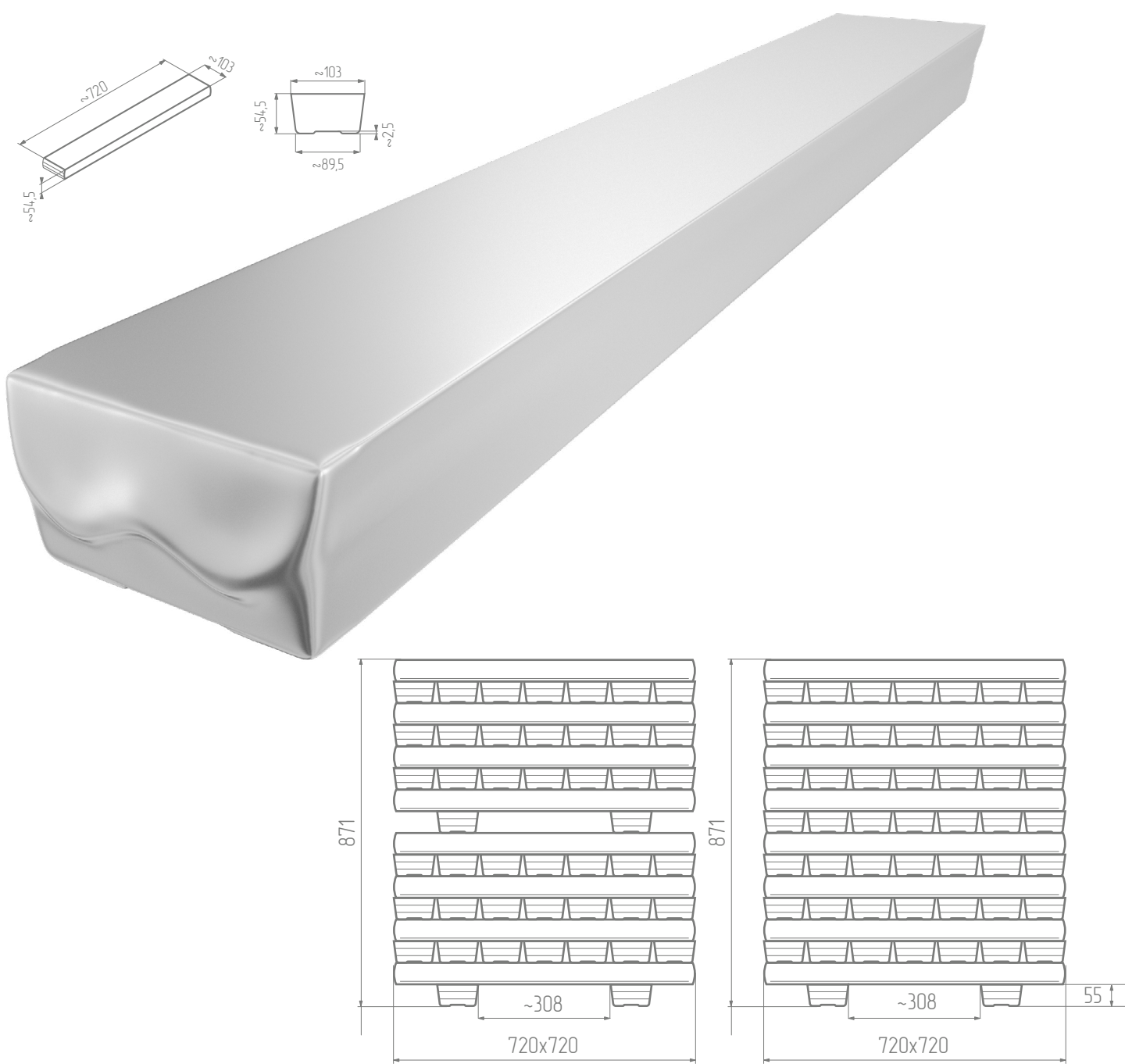
All types of vehicles, from bikes to spaceships, are made using aluminium, allowing people to travel at breakneck speeds safely, cross oceans, fly in the sky and even leave our planet. Transport also accounts for 27% of aluminium consumption, the largest share by any sector. Global aluminium consumption in transport is forecast to grow at 5-7% annually from 2020.

TRANSPORT SHARE IN ALUMINIUM CONSUMPTION

27%



PRIMARY FOUNDRY ALLOYS 10KG CONTINUOUS CASTING BAR



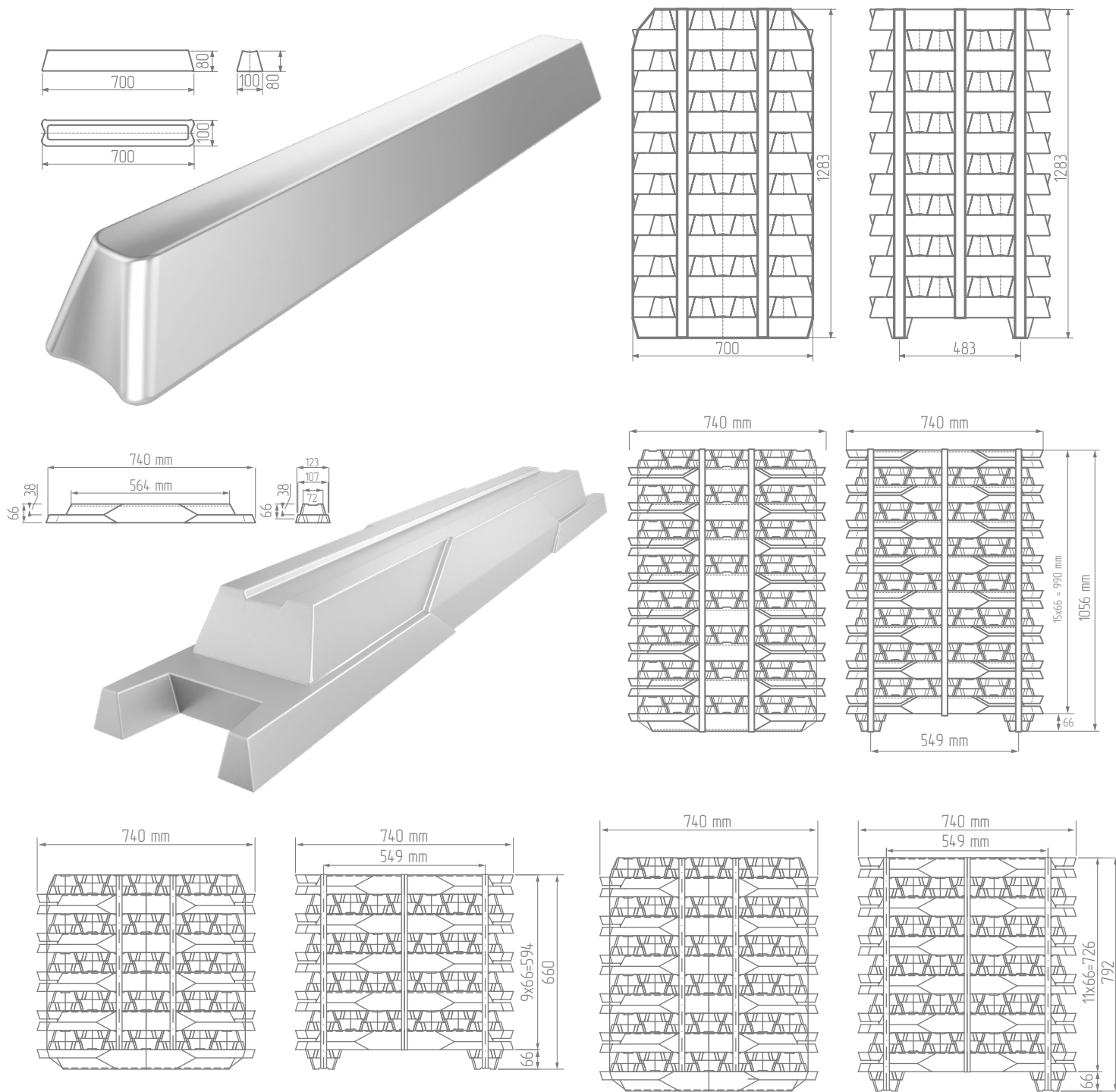
ALLOY SERIES ALSi7MG, ALSi11MG, ALSICU, ALSIMGMN

Sr-modified/non-modified
Nominal weight 10kg +/- 1kg
Bundle weight 650-1070kg
65-107 bars per bundle
Increased height of foot bars are available (bundle with double supporting bars)

Packed with 4-5 steel or plastic straps, polyethylene wrapping.
Highest quality control standards (Prefil, IA500).

Producer: Khakas

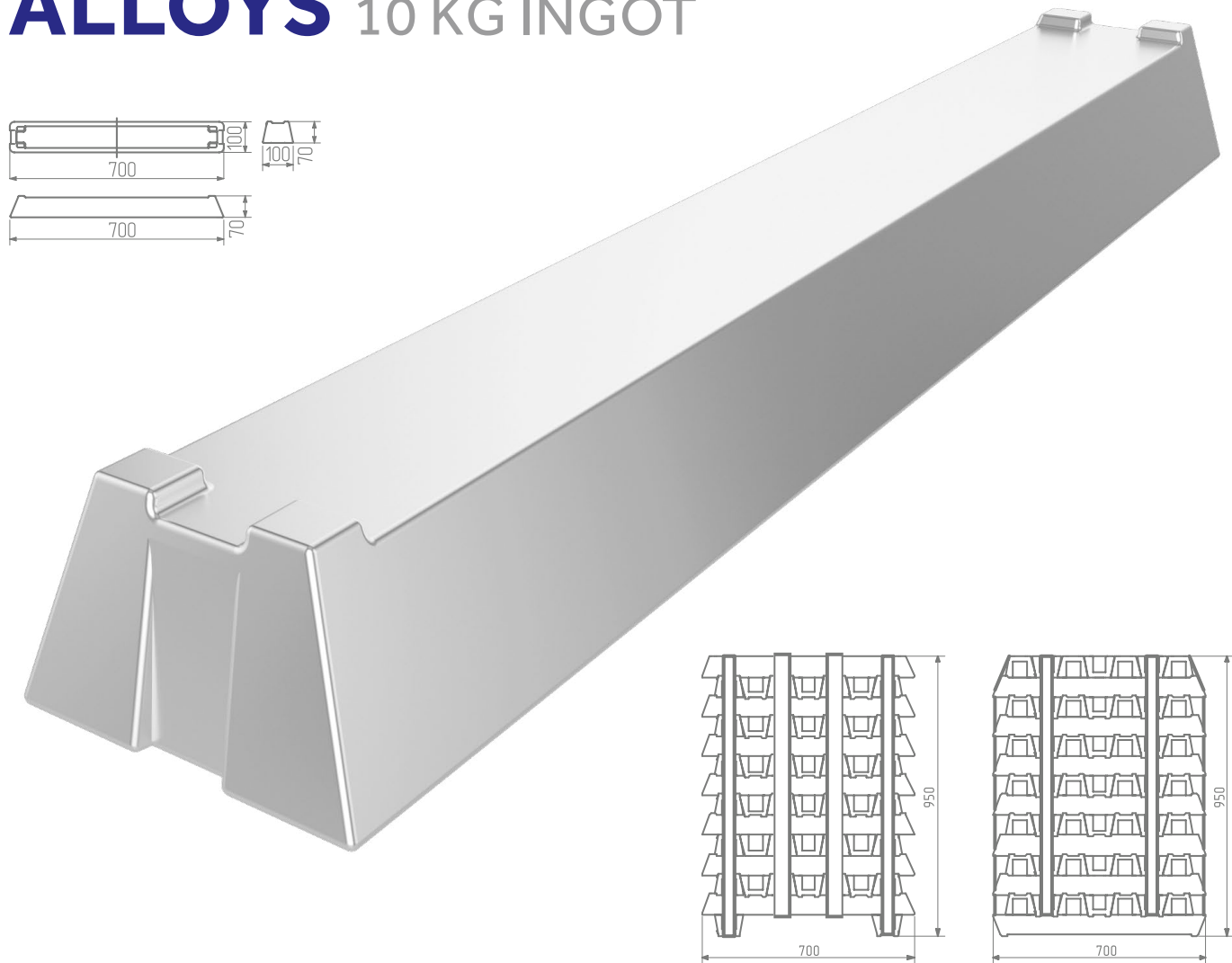
PRIMARY FOUNDRY ALLOYS 10 KG INGOT



ALLOY SERIES AISi7Mg, AISi11Mg, AISi10MgMn, AISiMgMn, AISiCu, AISi10

Sr-modified/non-modified Weight 10 kg +/- 1 kg Bundle weight 1070 kg +/-50 kg; 510 kg +/-30 kg 107-51 ingots per bundle	Packed in polyethylene wrapping with 4-5 steel or plastic straps Highest quality control standards (Prefil, Volcester , IA500)	Producer: Shelekhov (ex-Irkutsk) Increased height of foot ingots are available (bundle with double supporting ingots) Reduced distance between supporting ingots is available (360mm)
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PRIMARY FOUNDRY ALLOYS 10 KG INGOT



ALLOY SERIES AISi7Mg, AISi11Mg, AISi10

Sr-modified/non-modified Weight 10 kg +/- 1 kg Bundle weight 510 or 930 kg +/-10% 51 or 93 ingots per bundle	Packed in polyethylene wrapping with 6 steel or plastic straps	Producer: Sayanogorsk
--	---	------------------------------

DID YOU KNOW?

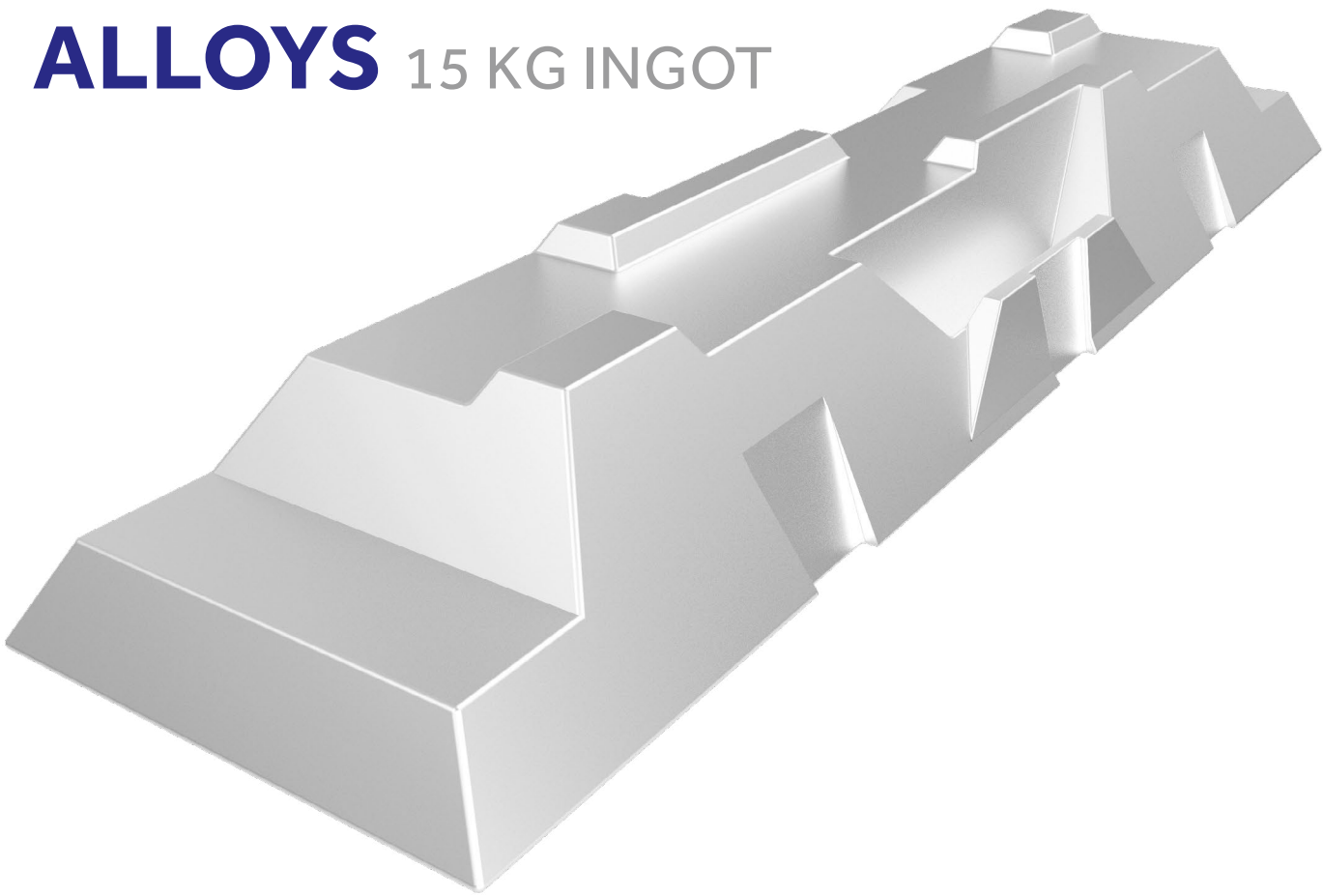
Vehicles utilising aluminium can achieve up to a 20% reduction in energy consumption through life cycle and up to 17% reduction in CO₂ emissions.

ENERGY
CONSUMPTION
REDUCTION
UP TO

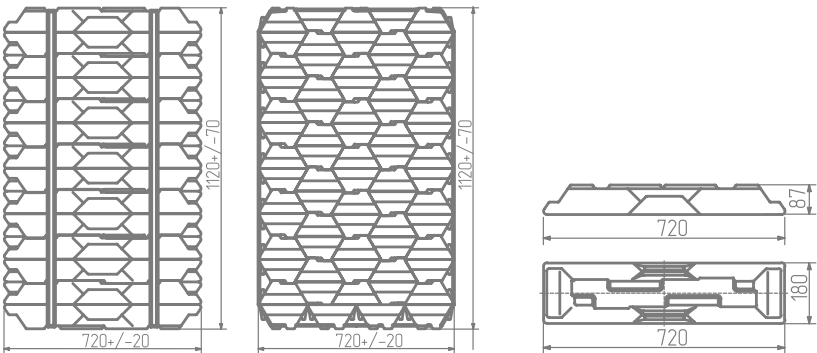
20%



PRIMARY FOUNDRY ALLOYS 15 KG INGOT



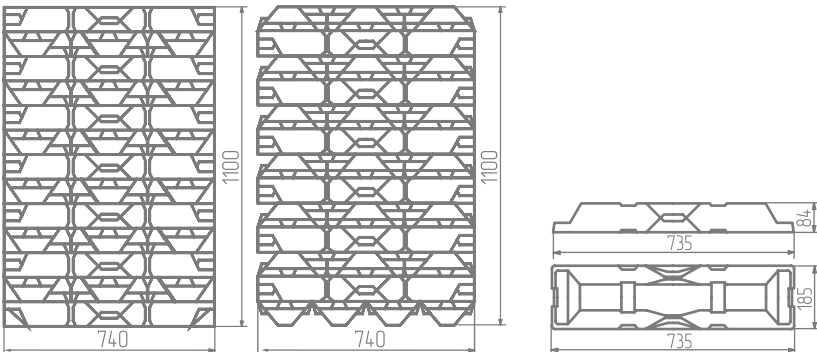
ALLOY SERIES AISi7Mg, AISi11Mg, AISiCu, Piston, AISiMgMn, AISi10



Sr-modified/non-modified
Weight 15 kg +/- 1.5 kg
Bundle weight 1035 kg +/- 103 kg
69 ingots per bundle
(59, 39 ingots per bundle is available)
Packed in 2 steel or plastic straps
(wirerod is available as well)
Polyethylene wrapping
Parallel stacking scheme

Producer: Novokuznetsk

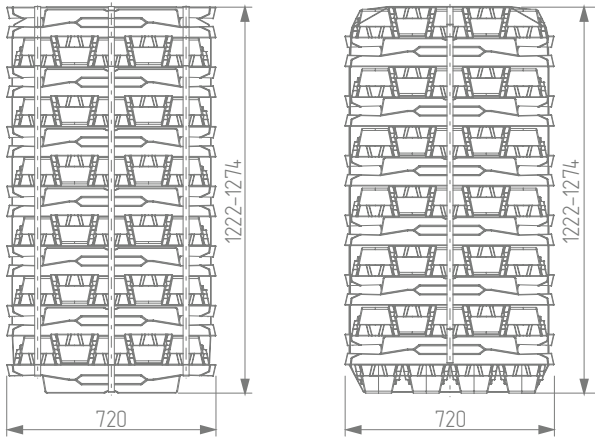
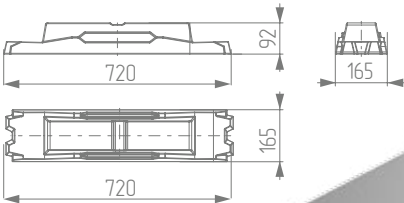
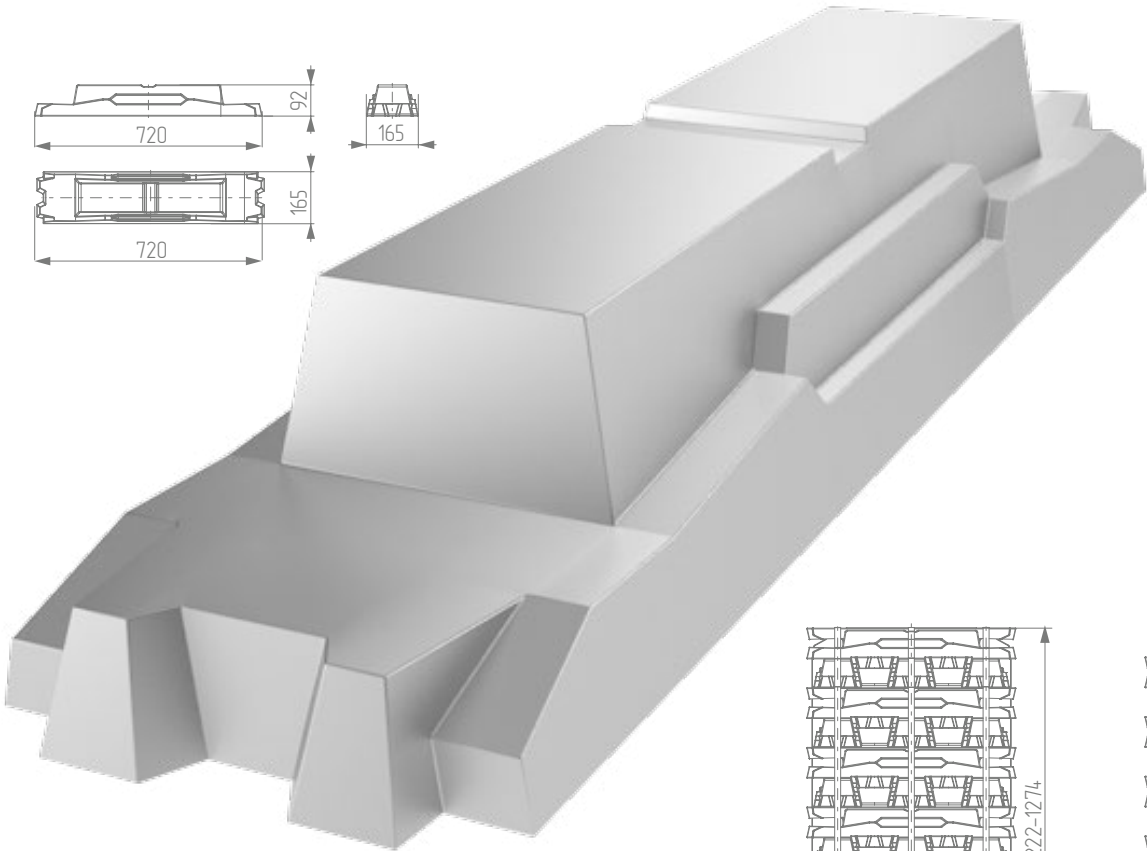
ALLOY SERIES AISi7Mg, AISi10Mg



Sr-modified/non-modified
Weight 15 kg +/- 1 kg
Bundle weight 510, 660 or 960 kg
34, 44 or 64 ingots per bundle
Packed with 2-4 steel or plastic straps, polyethylene wrapping
Highest quality control standards (IA500)

Producer: Krasnoyarsk

PRIMARY FOUNDRY ALLOYS 16 KG INGOT



ALLOY SERIES AISi7Mg, AISi11Mg, AISiCu, AISiMgMn

Sr-modified/non-modified
Weight 16 +/- 1 kg

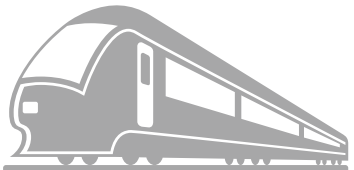
Bundle weight 704, 864 or 1024 kg
44, 54 or 64 ingots per bundle
Packed with 4 steel or plastic straps, polyethylene wrapping
Highest quality control standards (Prefil, IA500)

Producer: Khakas

DID YOU KNOW?

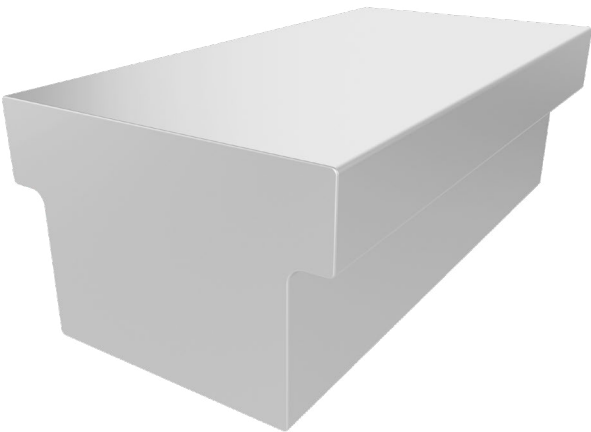
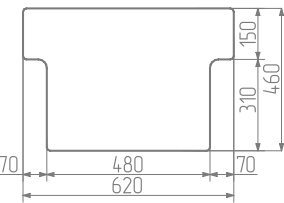
Thanks to aluminium, new high speed rail technologies promise speeds of >600 kmph without compromising safety.

RAIL SPEED
INCREASE
UP TO



>600 kmph

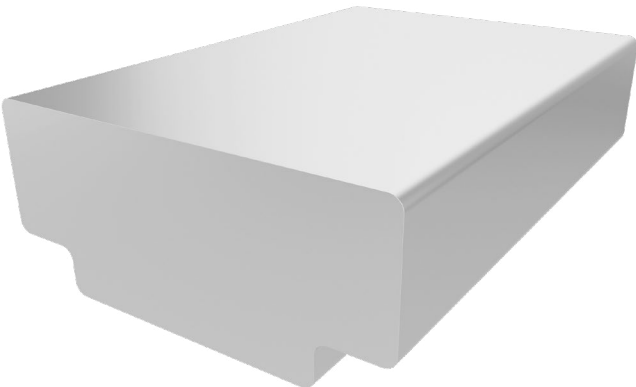
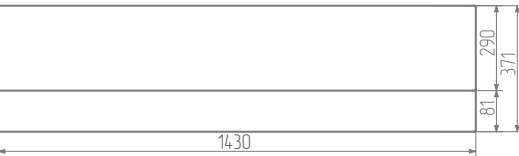
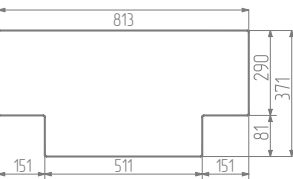
PRIMARY FOUNDRY ALLOYS T-BAR



ALLOYS T-BAR AISi7Mg, AISiCu, piston, AISi3Sr

Weight range: 300 – 750 kg Uncut butts Producer: Novokuznetsk

Length range: 520 – 1200 mm



ALLOYS T-BAR AISi7MgSr, AISi3, AISi3Sr

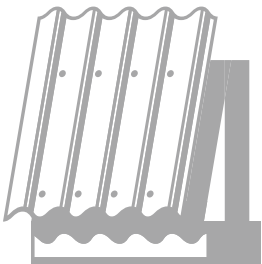
Weight range: 675 – 1150 kg Sawn to customer length Producer: Krasnoyarsk

Length range: 908 - 1550 mm

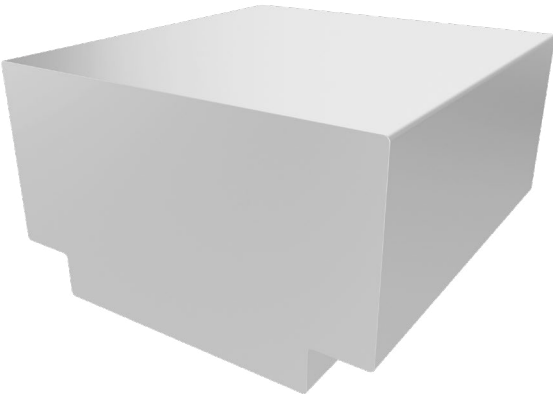
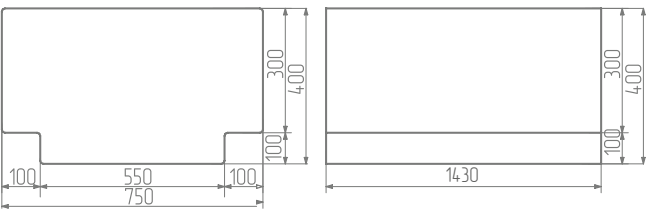
DID YOU KNOW?

Al-3%Si T-bars are used in Galvalume® steel coating. Galvalume® roofing has two main advantages over the more traditional [zinc] coated galvanized steel roof, namely that it offers superior corrosion resistance and secondly, its improved heat reflectivity. For these reasons, Galvalume® steel roofing is now increasingly replacing more traditional Galvanized roofs. While roofing and siding is the largest single application for Galvalume®, it is also used for several diverse applications (automotive, appliance, etc.)

ROOFING & SIDING
REPRESENT
Nº1
APPLICATION
FOR GALVALUME®



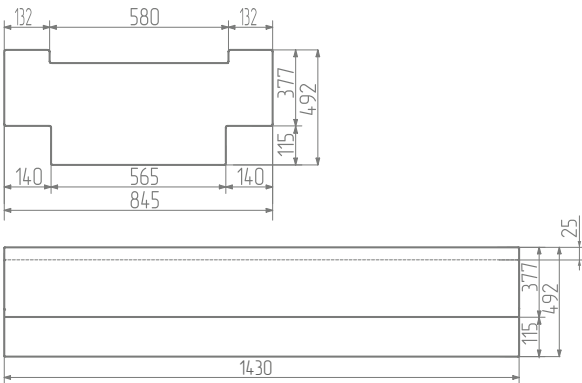
PRIMARY FOUNDRY ALLOYS T-BAR



ALLOYS T-BAR AISi7MgSr, AISi3, AISi3Sr

Weight range: 675 – 1100 kg Sawn to customer length Producer: Krasnoyarsk

Length range: 910 - 1480 mm



ALLOYS T-BAR AISi7MgSr, AISi3, AISi3Sr

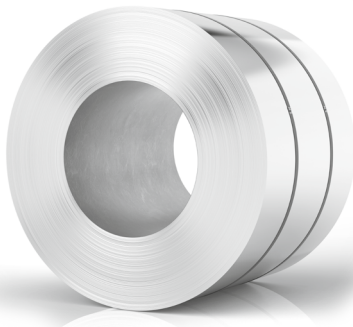
Weight range: 708 – 1450 kg Sawn to customer length Producer: Krasnoyarsk

Length range: 725 – 1490 mm

APPLICATIONS



galvanized roofing sheet



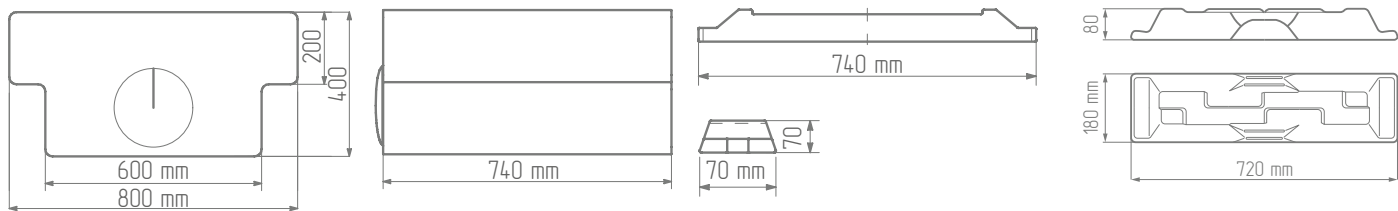
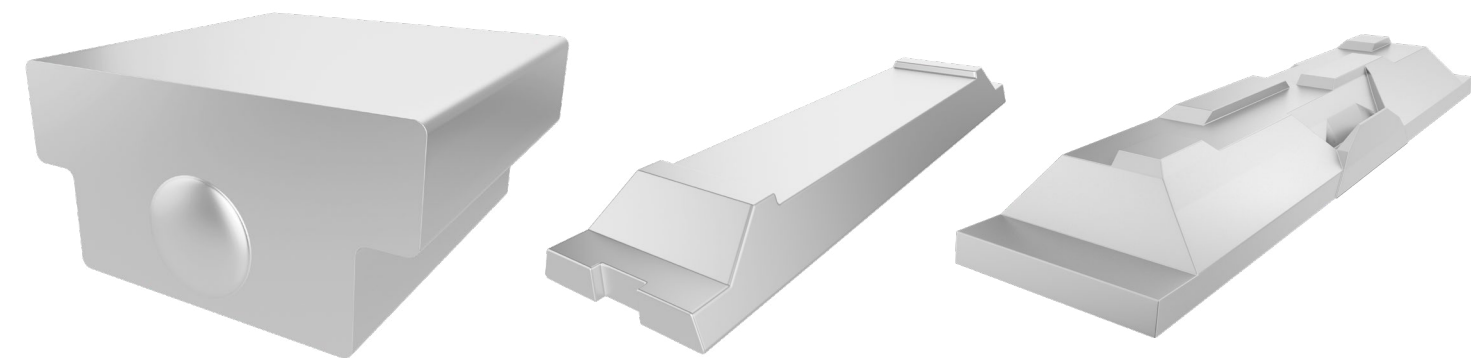
coated steel coil



steel coatings

HIGH PURITY ALUMINIUM

SAMPLE OF HIGH PURITY ALUMINIUM T-BAR & INGOT



SPECIFICATION

3-layer technology
Grades 3N8, 4N, 4N6
Regular electrolysis: A92 (P0303, P0304)

Shapes 15 kg ingot, T-bar
Producer: Krasnoyarsk, Sayanogorsk

Title	Dimensions, mm					Weight, kg
	L	B	B1	H	H1	
T-bar	800	800	600	400	200	600
Ingot	740	170		70		15
Ingot (Lock type)	720	180		80		15

APPLICATIONS



aerospace

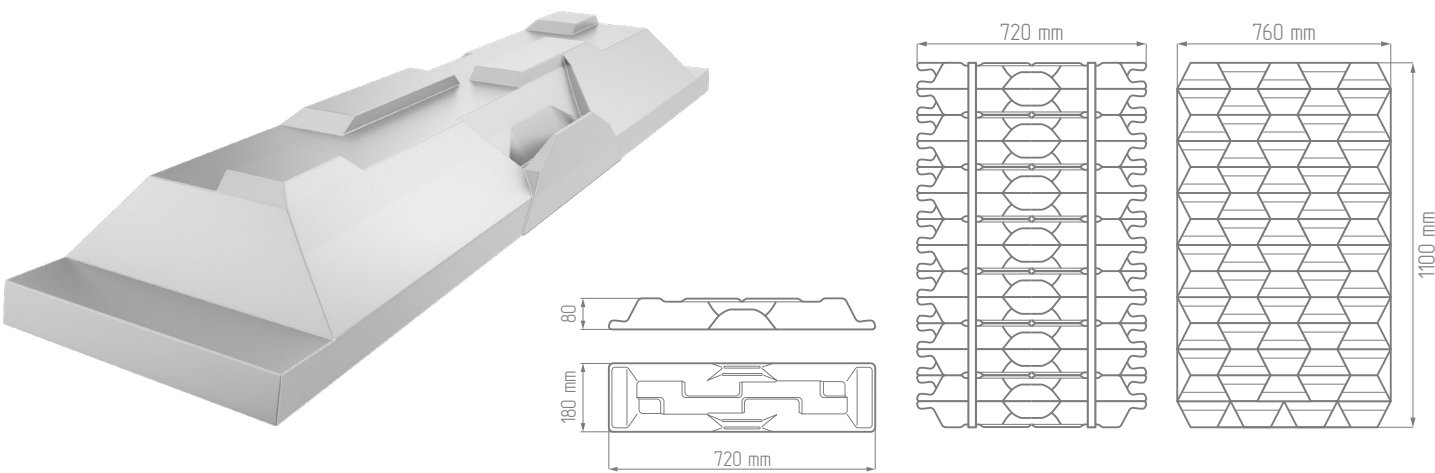


memory disks



condenser foil

PRIMARY ALUMINIUM RE-MELT INGOTS

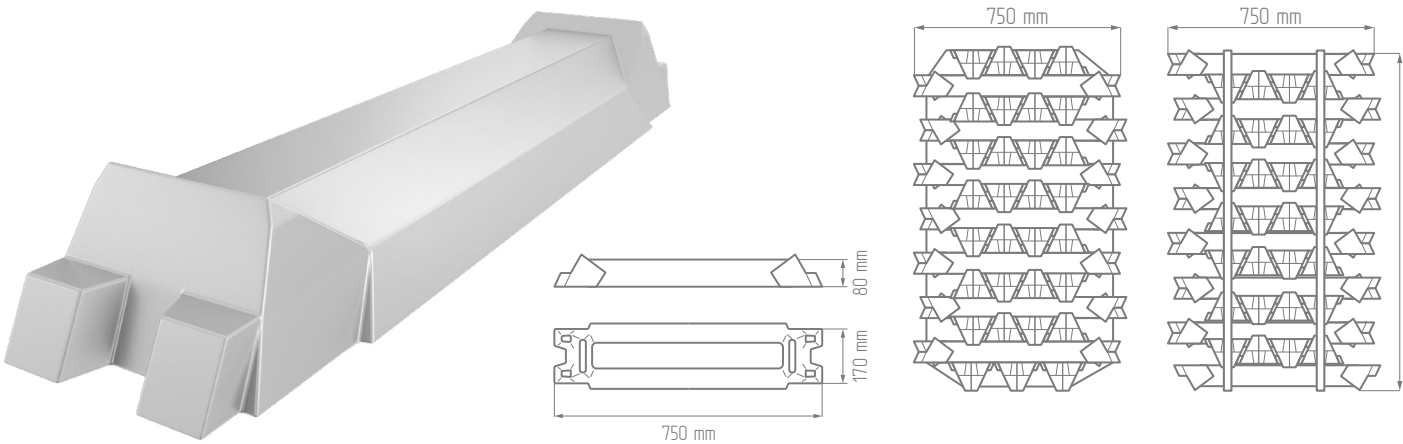


SPECIFICATION

Ingot:
– Lock type.
– Nominal weight 15 kg
– Ingot size: 720mm*180mm*80mm.

Bundle:
– Parallel stacking of ingots;
– Number of ingots – 69;
– Bundle weight – 1035kg.
– Bundle size – 1100mm*720mm*760mm

Producer: Bratsk
Typical purity of metal:
A7, A7E, A7EC.



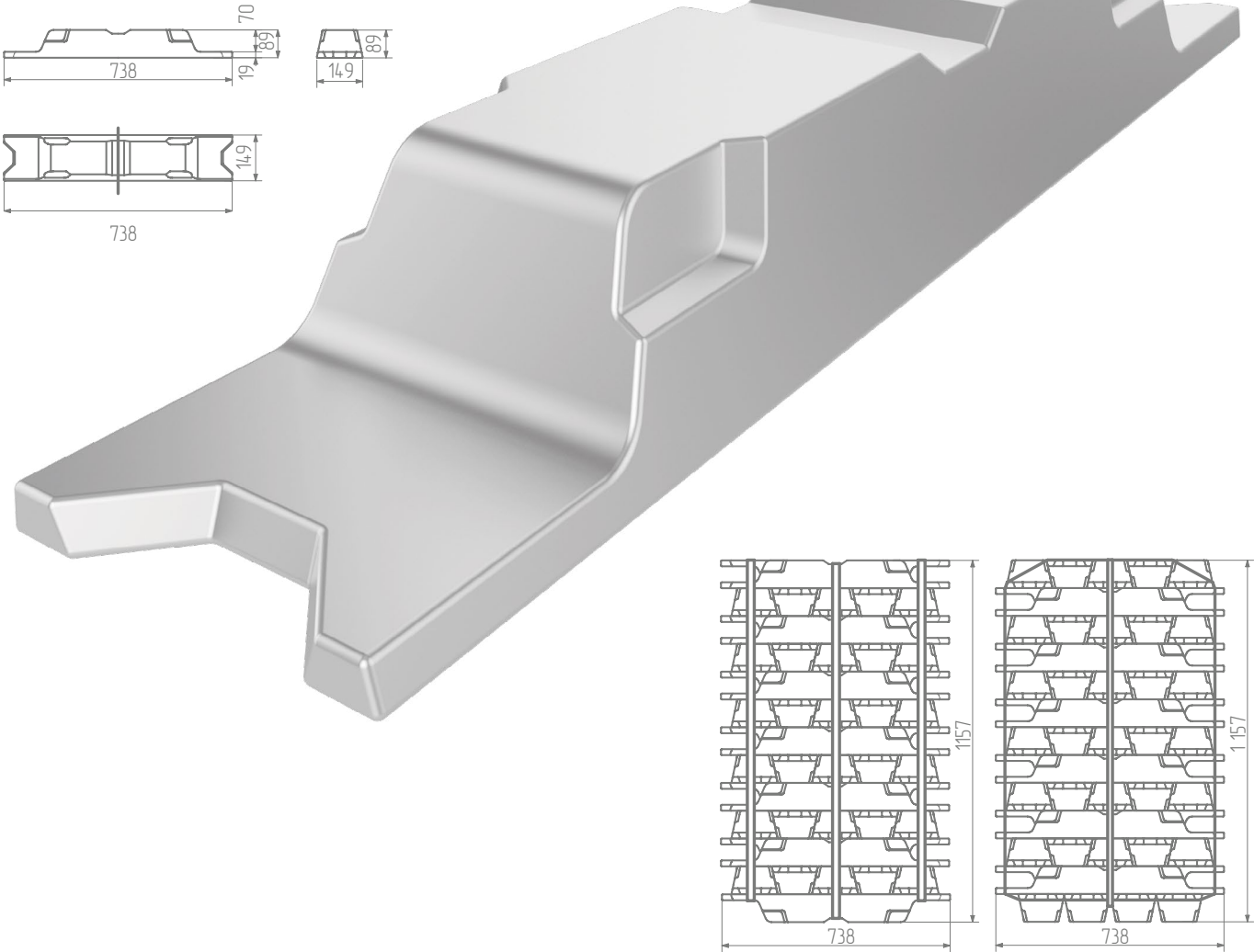
SPECIFICATION

Ingot:
– «Horned».
– Nominal weight 15 kg
– Ingot size: 750mm*170mm*80mm.

Bundle:
– Perpendicular stacking of ingots;
– Number of ingots – 59;
– Bundle weight – 885 kg
– Bundle size – 1180mm*750mm*750mm,

Producer: Bratsk
Typical purity of metal:
A7, A7E, A7EC.

PRIMARY ALUMINIUM RE-MELT INGOTS



SPECIFICATION

Unit weight 15 kg	Packed with 4 steel/plastic straps	Producer: Shelekhov (ex-Irkutsk)
Bundle weight 1000 kg +/- 10%	LME registered	LME brand: RUSAL I
64 ingots per bundle		Typical purity of metal: A85, A8, A7, A7E, A7EC.

DID YOU KNOW?

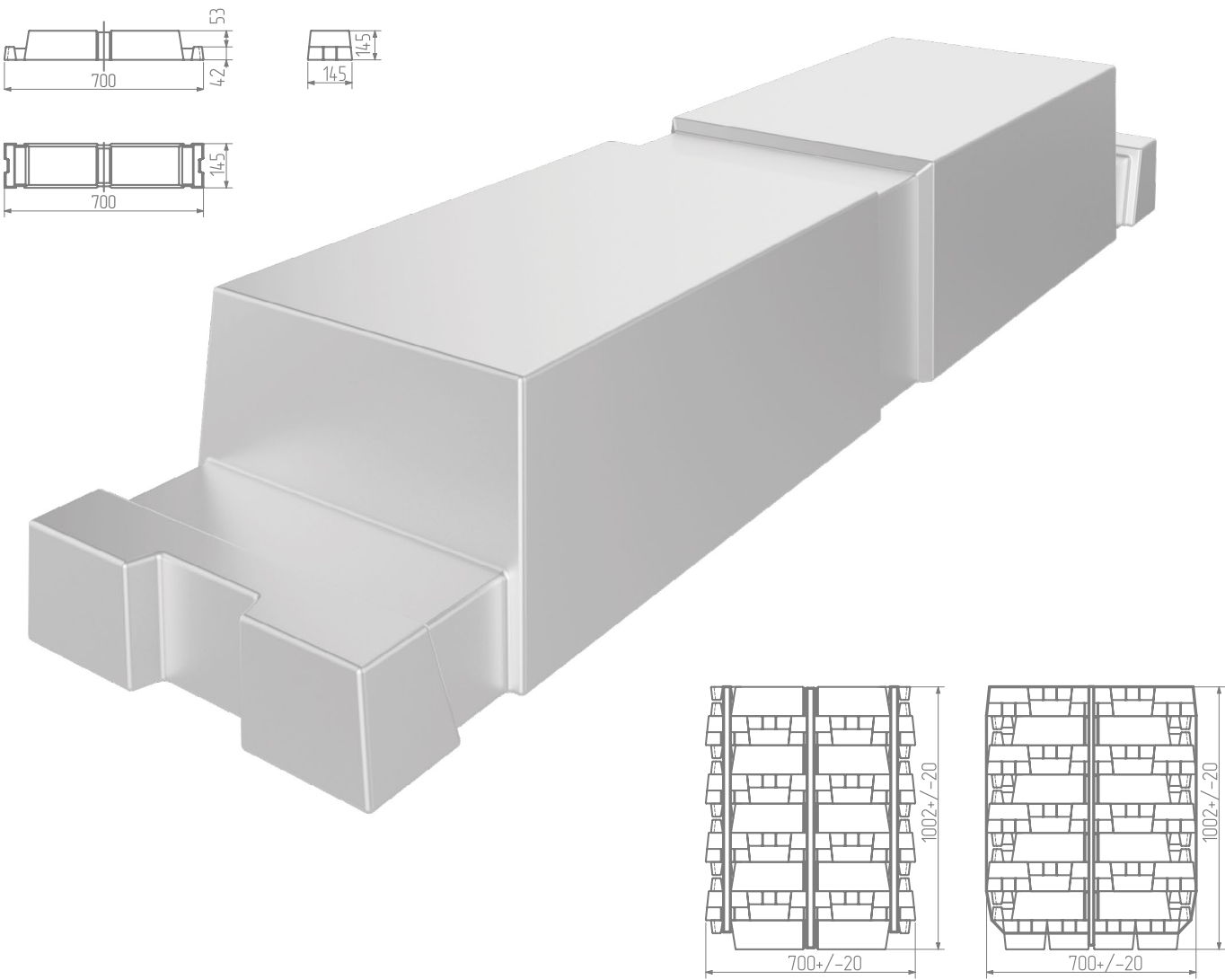
Russia is a country full of rivers, streams and lakes; the hydro power potential is enormous. 3/4 of Russia's hydro energy capacity are located in Siberia. With its key production base in Eastern Siberia, RUSAL has a unique competitive advantage.

SIBERIA ACCOUNTS

FOR **3/4**
OF RUSSIA'S HYDRO
ENERGY CAPACITY



PRIMARY ALUMINIUM RE-MELT INGOTS



SPECIFICATION

Unit weight 22.5 kg	Packed with 3+1 steel/plastic straps	Producer: Khakas
Bundle weight 990 kg +/- 10%	LME, SHFE registered	LME brand: RUSAL KH
44 ingots per bundle		Typical purity of metal: A85, A8, A7, A7E, A7EC.

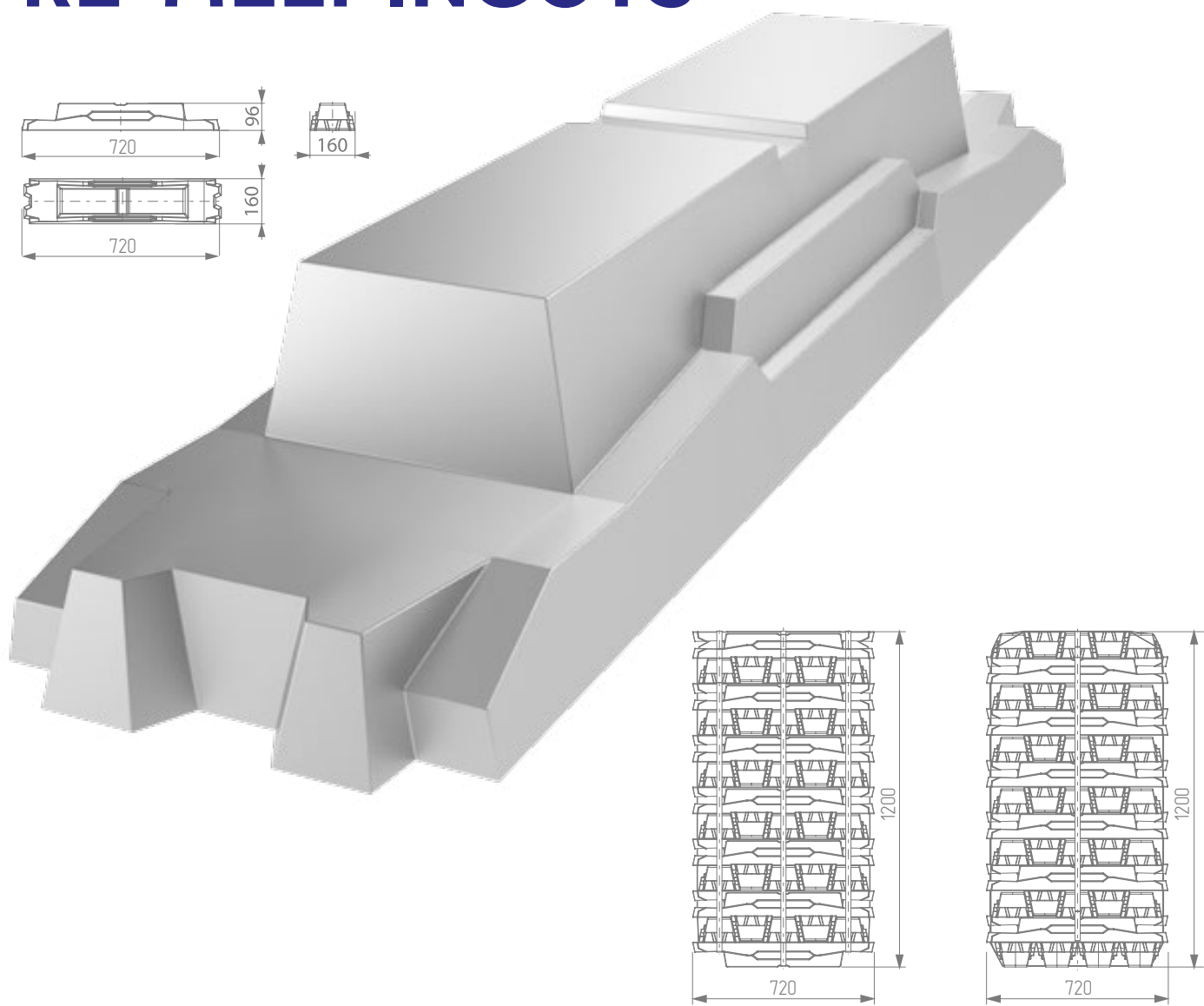
DID YOU KNOW?

Aluminium can be used in temperatures ranging between -80°C and +300°C, in any climatic conditions, and does not lose its properties.

ALUMINIUM
USAGE TEMPERATURE
RANGES BETWEEN
**-80°C ...
+ 300°C**



PRIMARY ALUMINIUM RE-MELT INGOTS



SPECIFICATION

Unit weight 16 kg
Bundle weight 1024 kg
64 ingots per bundle

Packed with 4 steel straps
LME registered

Producer: Khakas
LME brand: RUSAL KH

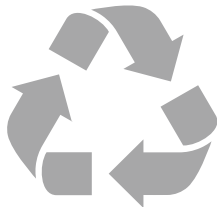
Typical purity of metal:
A85, A8, A7, A7E, A7EC.

DID YOU KNOW?

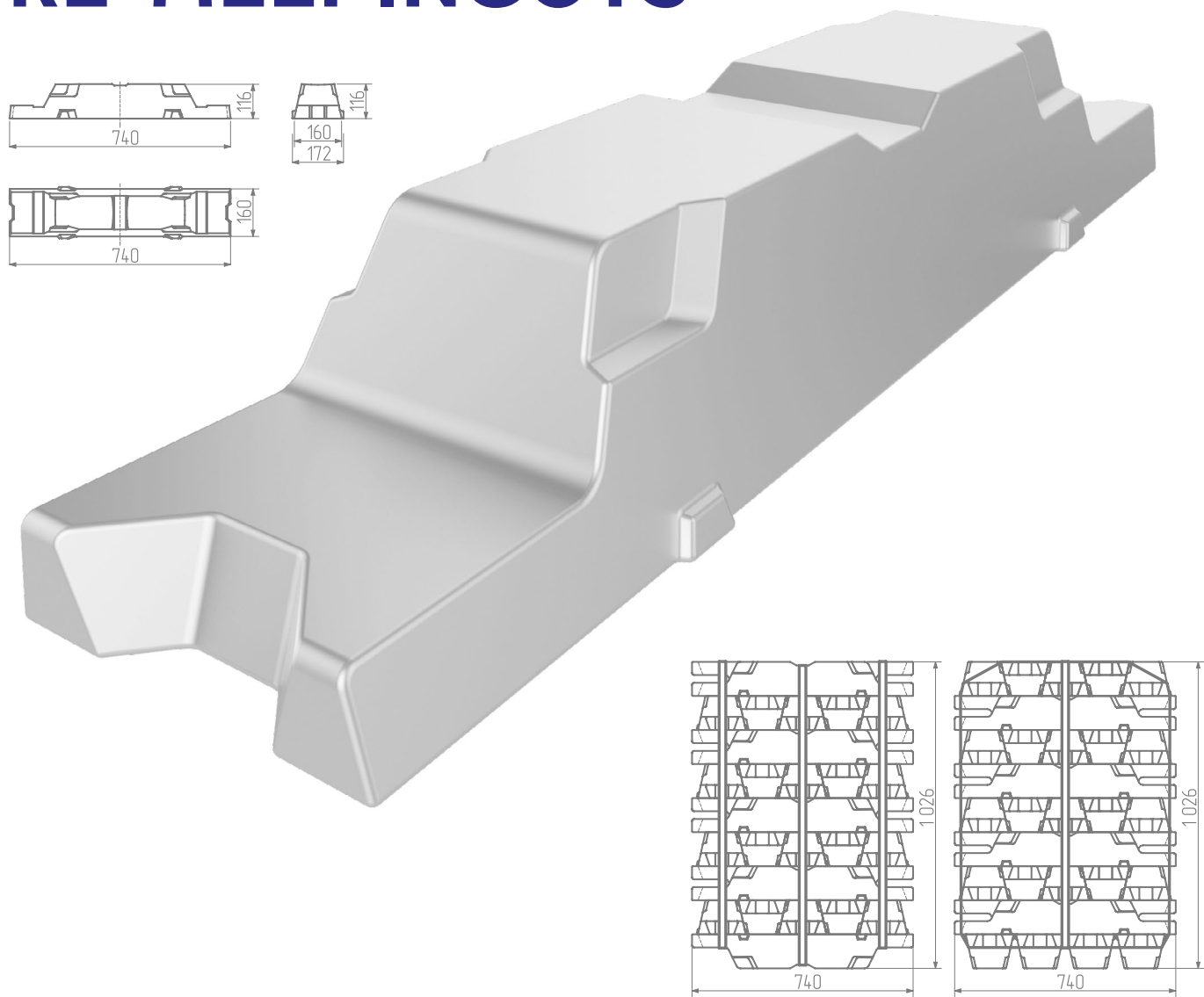
Aluminium is 100% recyclable and, like a Phoenix bird, can be reborn an endless number of times. About 75% of aluminium that has ever been produced on Earth is still in use.

ALUMINIUM
RECYCLABILITY
ACCOUNTS FOR

100%



PRIMARY ALUMINIUM RE-MELT INGOTS



SPECIFICATION

Unit weight 22.5 kg
Bundle weight 990 kg
44 ingots per bundle

Packed with 3+1 steel straps
LME, SHFE registered

Producer: BoAZ
Typical purity of metal: A85.

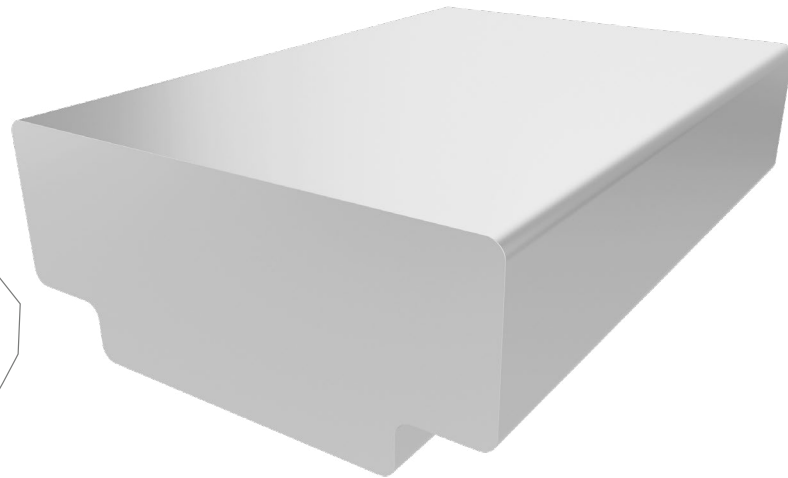
DID YOU KNOW?

Light, flexible, non-toxic and highly conductive aluminium is a perfect match for sustainable architecture. The minimum design service life of aluminium structures is 80 years.

SERVICE LIFE OF ALUMINIUM
STRUCTURES EQUALS

80
years



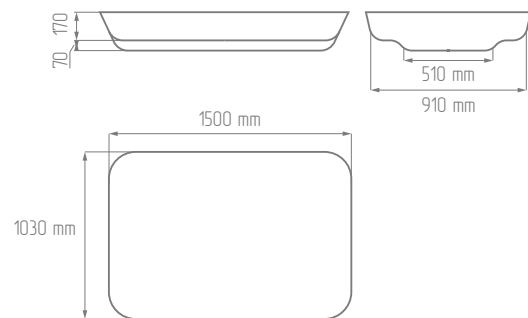
[illegible]

Minimum weight 727.5 kg
Maximum weight 772.5 kg
Normal weight 750 kg

Producer:
Krasnoyarsk
Novokuznetsk
Bratsk
Sayanogorsk
Khakas

LME brand:
RUSAL K
RUSAL N
RUSAL B
RUSAL S
RUSAL KH

Typical purity of metal:
A85, A8, A7, A7E, A7EC.



Title	Dimensions, mm			Weight, kg
	Length	Width	Height	
Top	1500	910-1030	170	700 +/- 50 kg
Bottom	70	510	70	700 +/- 50 kg

Producer:
BoAZ, Sayanogorsk

