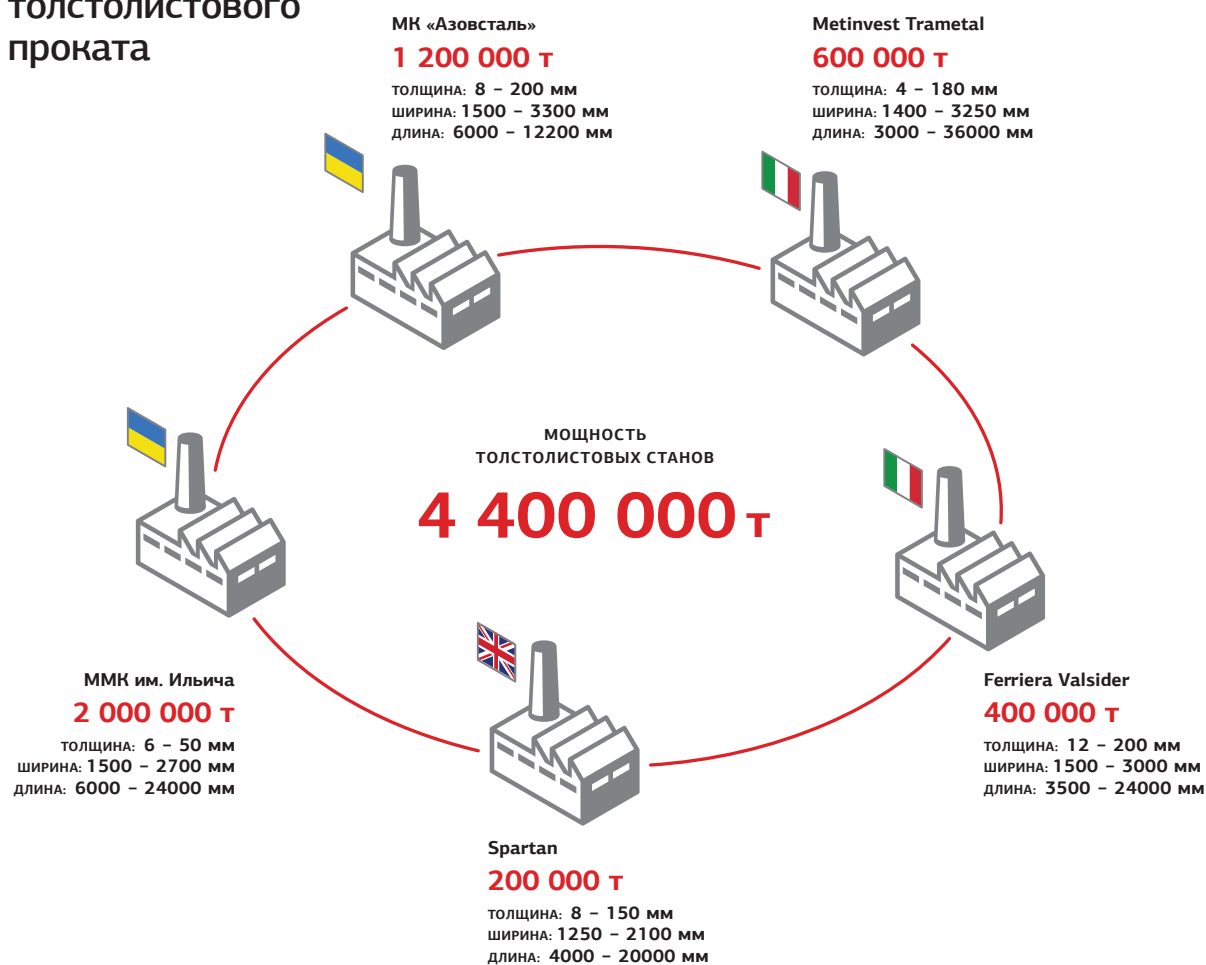


Плоский прокат



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Metinvest's products from Italy and UK
Producers: Metinvest Trameal SpA, Ferriera Valsider SpA, Spartan UK Ltd.

Application	Standard	Steel grade	Thickness, mm	Width, mm	Length, mm
Non-alloy structural steel	EN 10025-2:2004	S185+AR	4-120	3200 max*	4000-25000**
		S235JR+AR	4-120		
		S235JR+N	4-150		
		S235JRC+N	4-30		
		S235J0+AR	4-120		
		S235J0+N	4-150		
		S235J0C+N	4-30		
		S235J2+N	4-180		
		S235J2C+N	4-30		
		S275JR+AR	4-120		
		S275JR+N	4-150		
		S275JRC+N	4-30		
		S275J0+AR	4-120		
		S275J0+N	4-150		
		S275J0C+N	4-30		
		S275J2+N	4-180		
		S275J2C+N	4-30		
		S355JR+AR	4-120		
		S355JR+N	4-150		
		S355JRC+N	4-30		
		S355J0+AR	4-120		
		S355J0+N	4-150		
		S355J0C+N	4-30		
		S355J2+N	4-180		
		S355J2C+N	4-30		
		S355K2+N	4-180		
S355K2C+N	4-30				
E295+AR	4-120				
E295+N	8-180				
Weldable fine grain steel, normalized	EN 10025-3: 2004	S275N	4-150		
		S275NL	4-120		
		S355N	4-150		
		S355NL	4-120		
		S420N	8-100		
		S420NL			
		S460N			
S460NL					
Structural steels with improved atmospheric corrosion resistance	EN 10025-5: 2004	S355J0W+AR	5-50		
		S355J0W+N	5-100		
		S355J2W+N			
		S355K2W+N			

* Width max/min related to thickness and heat treatment

** Max/min length related to thickness and slab availability (weight is 3-20 tonnes)

Grades J2 and K2 can be supplied with improved properties through thickness direction (Option 4)

For non-alloy structural steel and structural steel, with improved atmospheric corrosion resistance, grades J2 and K2 can be supplied with improved properties through thickness direction (Option 4). For weldable fine grain steel all grades can be supplied with improved properties through thickness direction (Option 4).

For non-alloy structural steel, grades c can be supplied suitable for flangeability for thickness < 30 mm and for roll forming for thickness < 8 mm. Structural steel with improved atmospheric corrosion resistance with delivery condition c can be supplied suitable for flangeability (max thickness 20 mm).

For non-alloy structural steel, all plates can be supplied with suitability for hot-dip zinc-coating in class 2 and 3, for S355 quality in all grades also in class 1 (max thickness 35 mm).

According to European standards

hot rolled plate

Application	Standard	Steel grade	Thickness, mm	Width, mm	Length, mm
Boiler and pressure vessel steel	EN 10028-2:2009	P235GH	4-120	3200 max*	4000-25000**
		P265GH			
		P295GH			
		P355GH			
		16M03	5-80		
		13KPM04-5	7-80		
		P275NH	4-120		
		P275NL1			
		P275NL2			
		P355N	4-120		
		P355NH			
		P355NL1			
		P355NL2			
		P460NH	8-100		
P460NL1					
P460NL2					
Nickel-alloy steels with specified properties at low temperatures	EN 10028-4:2009	13 MHHI 6-3***	8-40		
		12 HI 14	8-50		
Weldable fine grain steel for dangerous product transportation	NF A36-215: 1997	P440HJ4	8-20		
	NF A36-215:1997	P460HJ2	8-16		
Non-alloy steels for quenching and tempering (cert. 3.1 only with ladle analysis)	EN 10083-2/ EN 10084	C40	8-180		
		C40+A	8-150		
		C40+N			
		C40+S			
		C40E	8-120		
		C40E+A	8-150		
		C40E+N			
		C40E+S			
		C45			
		C45+A	8-180		
		C45+N	8-150		
		C45+S			
		C45E			
		C45E+A	8-180		
		C45E+N			
		C45E+S			
		C50E	8-180		
C50E+A	8-150				
C50E+N					
C50E+S					

* Width max/min related to thickness and heat treatment

** Max/min length related to thickness and slab availability (weight is 3-20 tonnes)

*** This steel is certified from RINA Shipping Register as 510LF for thickness 8-35 mm

Boiler steel plates can be supplied with improved properties through thickness direction (Option 4). All grades +A and +S are supplied with 3.1 certificate only with ladle analysis and maximum hardness. All grades +N are supplied with 3.1 certificate with ladle analysis and mechanical properties.

Metinvest's products from Italy and UK
Producers: Metinvest Trameal SpA, Ferriera Valsider SpA, Spartan UK Ltd.

Application	Standard	Steel grade	Thickness, mm	Width, mm	Length, mm
Alloy steel for quenching and tempering (Cert. 3.1 only with ladle analysis)	EN 10083-3:2006	34CrMo4	7-50	3200 max*	4000-25000**
		34CrMo4+S			
		34CrMo4+A			
		42CrMo4	8-150		
		42CrMo4+A			
42CrMo4+S					
Boron steel for quenching and tempering (Cert. 3.1 only with ladle analysis)	EN 10083-3:2006	20MnB5	6-60		
		27MnCrB5-2			
		30MnB5			
Case hardened steel (Cert. 3.1 only with ladle analysis)	EN 10084:2008	16MnCr5	8-150		
		16MnCr5+A			
		16MnCr5+S			
		20MnCr5			
		20MnCr5+S			
Steel for offshore structures	EN 10225: 2009	S355G2+N	5-20		
		S355G3+N	5-40		
	API 2H	API2H GR.42	5-80		
		API2H GR.50			

* Width max/min related to thickness and heat treatment

** Max/min length related to thickness and slab availability (weight is 3-20 tonnes)

Boiler steel plates can be supplied with improved properties through thickness direction (Option 4)

For non-alloy steel for Q&T plate, grades +A and +S are supplied with 3.1 certificate only with ladle analysis and maximum hardness

For non-alloy steel for Q&T plate, grades +N are supplied with 3.1 certificate with ladle analysis and mechanical properties

According to European standards

hot rolled plate

Metinvest's products from Ukraine
Producer: Azovstal I&SW

Application	Standard	Steel grade	Thickness, mm	Width, mm	Length, mm		
Structural steel plate	EN 10025-2:2004	S235J0, 235JR, S235J2	8-150	1500 - 3200	6000 - 12200		
		S275JR, 275J0, S275J2					
		S355JR, 355J0, S355J2, S355K2					
	EN 10025-3:2004 DIN EN 10113-2	S355N, S355NL	8-100				
	EN 10025-4:2004	S275M, S275ML, S355M, S355ML, S420M, S420ML, S460M, S460ML	8-50				
EN 10025-6:2004	S690Q, S690QL, S890Q*	8-100					
Structural steel, resistant to atmospheric corrosion	EN 10025-5:2004	S355J2W+H	8-150	1500 - 3200	6000 - 12200		
	DIN EN 10155	S355J2G1W	8-100				
	EN 10083-2	C45	8-150** 8-150***				
Heat-resistant welded non-alloy and alloy steel for the production of vessels and equipment operating under pressure at normal or elevated temperatures	DIN EN 10028-2/ DIN 17155	P235GH/HI	8-150			1500 - 3200	6000 - 12200
		P265GH/HII					
		P295GH/17MH4					
		P355GH****/19MH6					
		16Mo3*****/-					
For pressure vessels and boilers	DIN 17102	STE255, WSTE255, TSTE255	8-150	1500 - 3200	6000 - 12200		
		STE285, WSTE285, TSTE285					
		STE315, WSTE315, TSTE315					
		STE355, WSTE355, TSTE355					
For vessels working under pressure	EN 10207	P235S, P265S, P275SL	8-60			1500 - 3200	6000 - 12200
For working under pressure from weldable thermomechanically treated fine grain steel	EN 10028-5	P355M, -ML, -ML2 P420M, -ML, -ML2 P460M, -ML, -ML2	8-52				
For pipeline construction where pipes of class A requirements are used	EN 10208-1	L210GA – L360GA	8-32				
For pipeline construction where pipes of class B requirements are used	EN 10208-2	L245NB – L415NB L245MB – L485MB	8-32				
TMCP steel for cold forming	EN 10149-2:2013	S315MC, S355MC, S420MC, S460MC, S500MC, S600MC	8-20	1500 - 3200	6000 - 12200		

* To be launched

** Normalized in furnace

*** After softening annealing

**** Plates over 40 mm are produced if the customer approves alloying with vanadium and niobium

***** Plates over 40 mm are produced if the customer approves alloying with niobium

Metinvest's products from Ukraine
Producer: Azovstal I&SW

Application	Standard	Steel grade	Thickness, mm	Width, mm	Length, mm
For the production of components and machine parts. Welding in most cases is difficult	DIN 17200	C45, CK45	8-150	1500-3200	6000-12200
			8-150		
Structural steel for general applications	DIN 17100	ST37-2, RST37-2, ST37-3	8-150		
		ST44-2, ST44-3			
		ST52-3			
For boilers and vessels working under pressure at elevated temperatures	DIN EN 10028-3	P275NH	8-50		
For boilers and vessels working under high pressure at low temperatures		P275NL1			
		P275NL2			
For boilers and vessels working under pressure at normal and low/high temperatures		P355H/ P355NH	8-150		
For boilers and vessels working under high pressure at low temperatures		P355NL1, P355NL2	8-100		
For pressure vessels	BS 1501.1	151-430A, 151-430B, 161-430A, 161-430B	8-100		
		161-430A, 161-430B	101-150		
		223-490A, 223-490B	8-150		
		224-460A, 224-460B			
		224-490A, 224-490B			
Structural steel with improved atmospheric corrosion resistance	EN 10025-5	S355J0W, S355J2W, S355K2W+N	8-130		

According to European standards

hot rolled plate

Metinvest's products from Ukraine
Producer: Ilyich I&SW of Mariupol

Application	Standard	Steel grade	Thickness, mm	Width, mm	Length, mm
For the production of conventional building constructions	EN 10025-2:2004, EN 10029:2010*	S235JR, S235JO, S235J2	6-50	1500-2700	6000-12000
		S275JR, S275JO, S275J2			
		S355JR, S355JO, S355J2, S355K2			
	EN 10025-3:2004, EN 10029:2010*	S275N, S275NL, S355N, S355NL, S420N, S420NL, S460N, S460NL			
EN 10025-4:2004, EN 10029:2010*	S275M, S275ML, S355M, S355ML, S420M, S420ML, S460M, S460ML				
Structural steel with improved atmospheric corrosion resistance	EN 10025-5:2004, EN 10029:2010*	S235J0W**, S235J2W**, S355J0WP**, S355J2WP, S355J0W, S355J2W, S355K2W			
Structural steel	EN 10025+A1:1993, EN 10029:1991*	S235JR, S235JRG1, S235JRG2, S235JO, S235J2G3, S235J2G4, S275JR, S275JO, S275J2G3, S275J2G4, S355JR, S355JO, S355J2G3, S355J2G4, S355K2G3, S355K2G4			
For the production of vessels and equipment operating under pressure at normal or elevated temperatures	EN 10028-2:2009, EN 10029:2010*	P235GH, P265GH P295GH, P355GH***			
For boilers and vessels working under high pressure	EN 10028-3:2009, EN 10029:2010*	P355NH, P355NL1, P355NL2, P275NH, P275NL1, P275NL2			
For cold forming	EN 10149-2013***, EN 10029:2010*	S460MC, S420MC, S355MC, S315MC, S500MC, S600MC			
Structural steel for general applications	DIN 17100-1980, DIN 1543-81	ST 37-2, RST 37-2, ST 37-3			
		ST 44-2, ST 44-3			
		ST 33, UST 37-2, ST 52-3****			
	BS 4360-1986	40A, 40B, 40C, 40D 43A, 43B, 43C, 43D 50A, **** 50B, **** 50C, **** 50D, ****			
Steel for quenching and tempering	EN 10083-3	30MnB5			
Structural steel with improved atmospheric corrosion resistance	EN 10025-5	S235J0W, S235J2W, S355J0W, S355J2W			

* Surface requirements according to EN 10029 (class S) is applied only to 9-32 mm plates.

** To be agreed upon with the producer. Possible only for thicknesses from 6 to 12 mm.

*** Production is possible only for thicknesses 6-20 mm.

**** Approval for delivery in normalized rolling condition or after thermomechanically rolled is required.

hot rolled plate

According to American standards

Metinvest's products from Italy and UK

Producers: Metinvest Trameal SpA, Ferriera Valsider SpA, Spartan UK Ltd.

Application	Standard	Steel grade	Thickness, mm	Width, mm	Length, mm
Steel for boilers and vessels	ASTM/ASME - PED (Cert. 3.1 - 3.2)	A/SA203 GR.D	8-60	3200 max*	4000 - 25000**
		A/SA203 GR.D (+S5)			
		A/SA203 GR.E			
		A/SA203 GR.E (+S5)			
		A/SA204 GR.A	6-80		
		A/SA204 GR.B			
		A/SA204 GR.C			
		A/SA285 GR.A	4-50		
		A/SA285 GR.A (+S5)			
		A/SA285 GR.B			
		A/SA285 GR.B (+S5)			
		A/SA285 GR.C	5-50		
		A/SA285 GR.C (+S5)			
		A/SA299 GR.A	5-50		
		A/SA299 GR.A (+S5)	5-50		
		A/SA516 GR.55	4-90		
		A/SA516 GR.55 (+S5)			
		A/SA516 GR.60			
		A/SA516 GR.60 (+S5)			
		A/SA516 GR.65			
		A/SA516 GR.65 (+S5)			
		A/SA516 GR.70			
		A/SA516 GR.70 (+S5)			
		A/SA387 GR.11 CL.1	8-80		
		A/SA387 GR.11 CL.2			
		A/SA387 GR.12 CL.1			
		A/SA387 GR.12 CL.2			
		A/SA537 CL.1	4-95		
		A/SA537 CL.1 (+S5)	4-95		
		A/SA662 GR.A	4-50		
A/SA662 GR.A (+S5)					
A/SA662 GR.B					
A/SA662 GR.B (+S5)					
A/SA662 GR.C					
A/SA662 GR.C (+S5)					

* Width max/min related to thickness and heat treatment

** Max/min length related to thickness and slab availability (weight is 3-20 tonnes)

According to American standards

hot rolled plate

Application	Standard	Steel grade	Thickness, mm	Width, mm	Length, mm
Structural steel	ASTM/ASME	A/SA36	4-150	3200 max*	4000 – 25000**
		A/SA283 Gr.C			
		A/SA283 Gr.D			
		A/SA572 Gr.50 type 1	4-100		
		A/SA572 Gr.55 type 1	5-50		
		A/SA572 Gr.60 type 3	8-32		
		A/SA573 Gr.58	4-40		
		A/SA573 Gr.65			
		A/SA573 Gr.70			
		A/SA633 Gr. A	4-100		
		A/SA633 Gr. A (+S5)			
		A/SA633 Gr. C			
		A/SA633 Gr. C (+S5)			
		A/SA633 Gr. D			
		A/SA633 Gr. D (+S5)	5-60		
		A/SA633 Gr. E			
		A/SA633 Gr. E (+S5)			
A/SA709 Gr.50 type 1	4-100				
Structural steels with improved atmospheric corrosion resistance		A/SA588 Gr.A	5-80		
		A/SA588 Gr.B			
		A/SA588 Gr.C			
		A/SA709 Gr.50W type A			
		A/SA709 Gr.50W type B			

* Width max/min related to thickness and heat treatment

** Max/min length related to thickness and slab availability (weight is 3-20 tonnes)

Metinvest's products from Italy
Producers: Metinvest Trameal SpA, Ferriera Valsider SpA

Application	Standard	Cert. 3.2	Cert. 3.1 - 3.2	Thickness, mm	Width, mm	Length, mm
Shipbuilding steel (according to RINA, ABS, GL, DNV, LRS and RR)	ASTM/ASME/ A/SA 131	A	A	4-100	3200 max*	4000 – 25000**
		B	B	4-100		
		D	D	5-100		
		D+Z	–	15-50		
		E	E	5-100		
		E+Z	–	15-60		
		–	CS	5-100		
		AH 27S	–	4-100		
		EH 27S	–	4-100		
		EN 27S	–	4-100		
		AH 32	AH 32	4-100		
		EH 32	DH 32	4-100		
		EH 32+Z	–	15-50		
		EN 32	EN 32	4-100		
		EN 32+Z	–	15-50		
		FH 32***	FH 32	4-100		
		AH 36	AH 36	4-100		
		DH 36	DH 36	4-100		
		EH 36+Z	–	15-50		
		EN 36	EN 36	4-100		
EN 36+Z	–	15-60				
FH 36***	FH 36	4-100				

* Width max/min related to thickness and heat treatment

** Max/min length related to thickness and slab availability (weight is 3–20 tonnes)

*** Only according to RINA

According to American standards

hot rolled plate

Metinvest's products from Ukraine
Producer: Azovstal I&SW

Application	Standard	Steel grade	Thickness, mm	Width, mm	Length, mm
Structural steel used in bolted or welded construction of bridges and buildings and for general construction purposes	ASME SA36/ SA36M	SA36 (A36)	8-152.4	1500-3200	6000-12200
Structural steel for general purposes	ASME SA283/ SA283M	C			
Structural steel, designed primarily for use in welded bridges and other structures	ASTM A514/ A514M	A514-B	8-31.8		
		A514-F	8-65		
		A514-H	8-50.8		
		A514-Q	8-152.4		
Structural steel used for riveted and bolted construction of bridges and riveted, bolted or welded construction of other structures	ASME SA572/ SA572M	42	8-200		
		50	8-101.6		
		60	8-32		
Structural steel plates intended primarily for service at atmospheric temperatures where improved notch toughness is important	ASTM A573/ A573M	70	8-40		
Structural steel plates intended primarily for use in welded bridges and buildings where savings in weight or added durability are important	ASTM A588/ A588M	A, B	8-152.4		
Structural steel plates for welded, riveted or bolted construction. This material is particularly suited for service at low ambient temperatures of -50°f [-45°c] and higher where notch toughness is required	ASTM A633/ A633M	C	8-50.8		
For welded structures of bridges	ASTM A709/ A709M	36	8-101.6		
		50 type 1, 2, 3			
		50W type A, B, C			
Structural steel with specific requirements for chemical composition	ASTM A830/ASTM A830M	1045	8-135		
Shipbuilding plates	ASTM A131/ A131M	A, B, D, E	8-50.8		
		AH32, DH32, EN32, AH36, DH36, EN36			
For welded tubular joints of offshore platforms and coastal constructions used in critical environments, resistant to impact, plastic fatigue and laminar tearing	API Specification 2H	42			
		50			
	API Specification 2Y	50			
		60			
For welded vessels working under pressure at moderate and low temperatures	ASME SA-537/ SA-537M	Class 1		8-101.6	
		Class 2		8-101.6*	
		Class 3		8-101.6	

* Plates over 50 mm thick are produced if the customer approves alloying with vanadium and niobium

hot rolled plate

According to American standards

Metinvest's products from Ukraine

Producer: Azovstal I&SW

Application	Standard	Steel grade	Thickness, mm	Width, mm	Length, mm
For welded boilers and pressure vessels working in normal, intermediate and high temperatures	ASME SA-202/ SA-202M	B	8-50.8	1500-3200	6000-12200
For welded vessels working under pressure	ASME SA-285/ SA-285M	C	8-50.8		
For welded vessels and boilers working under pressure	ASTM A-299/A- 299M	A	8-101.6		
For vessels operating under pressure in intermediate and higher temperatures	ASME SA-515/ SA-515M	60, 65, 75			
For vessels operating under pressure at moderate and low temperatures	ASME SA-516/ SA-516M	55, 60, 65, 70			
	ASTM A -517/A-517M	B			
		F	8-65		
Q		>65-101.6			

According to American standards

hot rolled plate

Metinvest's products from Ukraine
Producer: Ilyich I&SW of Mariupol

Application	Standard	Steel grade	Thickness, mm	Width, mm	Length, mm
Structural steel for shipbuilding	ASTM A131/ A131M	A, B, D, E	6-50	1500-2700	6000-12000
		AH32, EH32, EN32			
		AH36, EH36, EN36			
		AH40, DH40, EN40			
Structural steel	A36/A36M, ASTM A 6/ A 6M	A36/ A36M-05	6-50	1500-2700	6000-12000
	A283/A283M, ASTM A 6/ A 6M	A, B, C, D			
For vessels operating under pressure	ASTM A285/A285 M, ASTM A 20/ A 20M	A, B, C	6-50	1500-2700	6000-12000
	A515/A515M, ASTM A 20/ A 20M*	60, 65, 70			
	A516/A516M, ASTM A 20/ A 20M*	55, 60, 65, 70			
Structural steel	A572**/A572M, ASTM A 6/A 6M	42, 50, 55, 60, 65 type 1, type 2	6-50	1500-2700	6000-12000
		A573/A573M, ASTM A 6/ A 6M			
	A588/A588M, ASTM A 6/ A 6M	A, B, C K			
For welded structures of bridges	A709/A709M, ASTM A 6/ A 6M	36(250)	6-50	1500-2700	6000-12000
		50(345)			
		A, B, C			
Structural steel with improved atmospheric corrosion resistance	ASTM A709	50WT1 type 1	6-50	1500-2700	6000-12000

* For plates produced according to ASTM A515/A515M, A573/A573M approval for delivery in normalizing rolling condition or after thermomechanically rolled is required.

** Grade 65 plates are delivered only as type 3; for grade 60 and 65 plates thickness is 32 mm max.

Metinvest's products from Ukraine
Producer: Azovstal I&SW

Application	Technical condition or standard	Steel grade	Thickness, mm	Width, mm	Length, mm
Structural steel	GOST 14637	ST 2SP	8-150	1500-3200	6000-12200
		ST 3SP (Category-5)			
		ST 3SP (Category 6)	10-40		
		ST 3GSP	8-40		
	GOST 1577	ST 4SP	8-150		
		ST 5SP			
08, 10, 15					
20, 25, 30, 35, 40, 45, 50					
Structural plate made of spring steel, carbon and alloy steel	GOST 4543	30XGSA	8-100		
	GOST 14959	65G			
Structural steel	GOST 27772*	C255	8-40		
		C245	8-10		
		C345	8-150		
	TU 14-1-2659-2003	14XGN2MDAFB (C70)	8-70		
	By customer request	16XGMFTR (S60)	8-60		
		16XGMFTR (S70)	8-50		
		16XGMFTR (S80)			
	GOST 19281	265**	8-150		
		295**	8-100		
		315**	8-60		
		325**	8-60		
		345**	8-32		
		355**	8-20		
		375**	8-50		
		390**	8-50		
	TU 14-1-4323-2007	12G2S (I)	10	2400-2700	
11-50			2000-2700		
51-80			1800-2500		
81-150			1500-2500		
12G2S (II)		10	2400-2700		
	11-40	2000-2700			
TU 14-1-5044-91	10GDN1FU	10-40			
TU 5.961-11650-97	AB2-M (12HN3M)	8-35	2000-3200	6000-11500	
					6000-10000

* Production is possible with the buyer's acceptance of delivery without implementing spec. 3.2 of GOST 27772 in the part with indication of acceptance numbers.

** For the following steel grades: 09G2, 14G2, 15GF, 16GS, 17GS, 17G1S, 09G2S, 09G2SD, 10G2S1, 10G2S1D, 14G2AF, 16G1AF, 10HSND, 15HSND, 09G2D, 14G2AFD, 16G2AFD.

According to CIS standards

hot rolled plate

Application	Technical condition or standard	Steel grade	Thickness, mm	Width, mm	Length, mm
Structural steel	TU 14-1-4083-86	13GS	8-50	1500-3200	6000-11800
		13GS-U			
		13G1S-U			
		08G2BT-U			
		09G2FB			
	10G2FB				
	By customer request	06G2MFB	10-80		6000-12200
Engineering steel plate	TU U 27.1-26416904-173:2010	25XGSR	14-36	1600-2500	6000-12000
	TU U 27.1-26416904-201-210				
	TU 14-1-5517-2005, By customer request	16X2GSB (S70/S60)	10-20	1500-3200	
Welding purposes and manufacturing of parts and fittings for pressure vessels and boilers working at normal, low and high temperatures	GOST 5520	15K	8-60	2000-3200	6000-12200
		20K	21-60		
		22K	25-70		
		09G2S, 10G2S1, 16GS	8-150		
		17GS, 17G1S	8-20		
		12X1MF	8-40		
		12XM	8-150		
		10X2M	10-50		
For welded vessels working under pressure at temperatures from -80 to +475 c and used in the oil, gas, petrochemical and chemical industries	TU 14-1-5065-2006	09G2SUCH, 09G2SUCH (N)*	8-150	2000-3000	6000-12000
		09G2SUCH (NT)**	10-150		
Welded heavy duty structures: pressure vessels, handling machinery, etc.	TU U 7.126416904-084:2008	15XGN2MAFAch	8-50	2000-2600	5000-11500
For pressure vessels	By customer request	20KA	10-150	1500-3300	4000-12200
		22K	8-120		5000-10000
For welded vessels used in the gas and petrochemical industry	TU 14-1-4853-90	20UCH	10-150	1500-3200	6000-12000
General bridge construction and elements of bridges working at normal and low temperatures	GOST 6713	16D	8-60		6000-12200
		10XSND	8-40		
		15XSND	8-50		
Bridge construction	TU 14-1-5355-98	14XGNDTS	8-50	1500-2500	6000-12000

hot rolled plate

According to CIS standards

Metinvest's products from Ukraine

Producer: Azovstal I&SW

Application	Technical condition or standard	Steel grade	Thickness, mm	Width, mm	Length, mm
Heavy duty machine building. Also used in shipbuilding and bridge construction	TU U 27.126416904150:2005, TU U 27.105416923- 085:2006	06GB (06GBD) /355, 06GB (06GBD) /390, 06GB (06G2BD) /440	8-50	1500-3200	6000-12000
Structural steel for shipbuilding	GOST 5521	A	8-60	1500-3200	6000-12200
High strength structural steel for shipbuilding		B, D, E	8-50		
		A27S, D27S, E27S			
		A32, D32, E32			
		A36, D36, E36			
		A40, D40, E40	8-40		
A40S, D40S, E40S					

According to CIS standards

hot rolled plate

Metinvest's products from Ukraine
 Producer: Ilyich I&SW of Mariupol

Application	Technical condition or standard	Steel grade	Thickness, mm	Width, mm	Length, mm
Structural plate	GOST 14637, GOST 380, GOST 19903	ST 3 (PS, SP, GPS, GSP)	6-50	1500-2700	6000-12000
		ST 4 (PS, SP)			
		ST 5 (PS, SP, GPS)			
	GOST 1577, GOST 19903	20, 40, 45			
		GOST 19281, GOST 19903			
	17G1S, 17GS				
	10XSND				
	15XSND				
	09G2D, 09G2SD				
	10G2S				
	GOST 27772*, GOST 19903	16G2AF			
		S235, S245, S255, S275, S285			
		S345, S345K			
		S375			
S390, S390K					
Boiler and pressure vessel steel	GOST 5520**, GOST 19903	S440			
		09G2S, 10G2S1, 16GS			
		15K, 16K, 18K, 20K, 22K			
Structural steel for shipbuilding	GOST 5521	17GS, 17G1S			
High strength structural steel for shipbuilding		A, B, D			
		A32, D32			
		A36, D36			
Structural steel for shipbuilding	GOST R 52927	A40, D40			
High strength structural steel for shipbuilding		A, B, D, E			
		A32, D32, E32			
		A36, D36, E36			
		A40, D40, E40			

* To be approved by the producer

** Plate according to GOST 5520 is delivered without heat treatment, but with T/O testing

Metinvest's products from Ukraine
Producer: Azovstal I&SW

Application	Technical condition or standard	Steel grade	Thickness, mm	Width, mm	Length, mm
Plate for general purpose welded structures and construction where improved notch toughness at low temperatures is not required by design. The plates are used in buildings, tension bridge structures, etc.	CAH/CSA-G 40.21	44W, 300W	8-100	1500-3200	6000-12200
		50W, 350W			
		50WT, 350WT			
Welded structures where improved notch toughness at low temperatures is required by design for key elements of tension bridge structures and other similar structures	CAH/CSA-G 40.21	60W, 400W	8-20	1500-3200	6000-12200
Welded structures and constructions where improved notch toughness at low temperatures is not required by design. The plates are used in buildings, tension bridge structures, etc.					
Structural steel for general applications	JIS G3101	SS400	8-150	1500-3200	6000-12200
		SS490			
Structural steel for welded structures	JIS G3106	SM400A, SM400B	8-100	1500-3200	6000-12200
		SM400C	8-150		
		SM490A, SM490B	8-100		
		SM490YA, SM490YB	8-150		
Structural steel for building construction	JIS G3136	SH490B	8-50	1500-3200	6000-12200
	IRA M-IAS U500-42:2000	F-24	8-150		
Constructions loaded under critical exploitation conditions	IS 2062	FE410WB	8-120	1500-3200	6000-12200
Structural steel for general applications	SAE J403	G10120/1012, G10200/1020, G10210/1021, G10450/1045	8-150	1500-3200	6000-12200

According to the standards of other countries

hot rolled plate

Metinvest's products from Ukraine
Producer: Ilyich I&SW of Mariupol

Application	Technical condition or standard	Steel grade	Thickness, mm	Width, mm	Length, mm
For welded general purpose structures, where impact strength at low temperatures is not a design requirement	CSA G 40.21*	300W (44W)	6-50	1500-2700	6000-12000
		350W (50W)			
		350WT (50WT)			
		400W (60W)			
		260W(33W)			
		380W(55W)			
		260WT (33WT)			
		300WT (44WT)			
		380WT (55WT)			
		400WT (60WT)			
Structural steel for general applications	JIS G3101	SS330	6-50	1500-2700	6000-12000
		SS400			
		SS490			
		SS540			
Steel for welded structures	JIS G3106	SM400A, SM400B	6-50	1500-2700	6000-12000
		SM400C			
		SM490A, SM490B			
		SM490C			

* To be approved by the producer (except 300W, 350W steel grades).

Metinvest's products from Ukraine
Producer: Azovstal I&SW

Technical condition or standard	Steel grade	Thickness, mm	Width, mm	Length, mm						
TU U 27.1-26416904191:2006	K52, K54, K55, K56, K60	8-27*	1500-3300	11500-12200						
TU 14-1-1921-76	12G2S-K50	8-11.0		1500-3300	6000-12200					
	17GS-K52, 17G1S-K52									
TU 14-1-1950-2004	17G1SU-K52, 17G1SU-K55	8-17.5			1500-3300	6000-12200				
	6G2SAF (K60)	8.5-10.5								
TU 14-1-3636-96	13GS, 13GS-U, 13G1S-U, 13G1SB-U	8-22				1500-3300	5800-6000/ 11500-11800			
TU 14-1-3978-96	09G2FB	9.5-22					11500-11800, 11900			
TU 14-1-4034-96	10G2FB	8-22					1500-3300	11500-11800		
TU 14-1-4627-96	10G2FBU	9-26						1500-3300	11500-11800	
TU 14-1-5293-95	10G2FB	8-22							1500-3300	11500-11900
TU 14-1-5346-97	13GS	8-12	1500-3300							5900-11800
	13G1S-U									
TU 14-1-5351-97	X70 (K60)	9-30*		1500-3300						11500-12200
TU 14-1-5364-98	X65, X70	10-22			1500-3300					11300-11600
TU 14-1-5382-99	X60	9-22								1500-3300
TU 14-1-5383-99	X52									
TU 14-1-5384-99	X56									
TU 14-1-5385-99	X65									
TU 14-1-5477-2004	13G1S-U (K55)					10-20	1550-2530	11500-12000		
	17G1S-U (K52)	8-16								
TU 14-1-5422-2001	10G2FB	8-22	1500-3300			11500-11800- 24000				
TU 14-1-5443-2002	08G1B	8-22				1500-3300	6000-12200			
TU 14-1-5514-2005	07GBF-U-K48-S2	14-32								
	07GBF-U-K50-S2, S3									
	07GBF-U-K52-S2, S3									
TU 14-1-5515-2005	05G2BU-K65	20	2500, 2650	24000-24300; 18800-19100						
TU 14-1-5523-2005	X46, X52, X56, X60	10-30*	1500-3300	11550-11650						
	K52									
TU 14-1-5535-2006	K52, K55, K56, K60	10-23*	1520-3300	11600-12100/ 17800-18300						
	X60, X65, X70									
TU 14-1-5540-2006	07GBF-U, 08GBF-U	12-32	1600-3200	11500-12200						
TU 14-1-5339-96	10G2FBU	16-60		1600-3200	6000-11800					
TU 05764417-014-94		16-48								
TU 14-1-5527-2006	06G1NMFBD	15-40	1500-3300			6000-12000				
Technical requirements for the supply of plates ANSI/API 5L	BM/L245M; X42/L290; X46/L320; X52/L360; X56/L390; X60/L415; X65/L450; X70/L485; X80/L555	9-32*	1500-3200	5800-12200						

* For thicknesses over 22 mm, approval of the producer is required

According to welded pipe production standards

rolled steel for
electric-welded pipes

Metinvest's products from Ukraine
Producer: Ilyich I&SW of Mariupol

Thechnical condition or standard	Steel grade	Thickness, mm	Width, mm	Length, mm
TU 14-1-1921-76	12G2S	7.5	1500-2700	11000-12000
	17GS, 17G1S	8.0		
		9.0		
		10.0		
		11.0		
		12.0		
TU 14-1-3636-96	13GS, 13GS-U	8-22		11500-11800
	13G1S-U, 13G1SB-U			11500-11900
TU 14-1-3978-96	09G2FB	9.5-22		11500-11800
TU 14-1-4034-96	10G2FB	8-22		11500-11800
TU 14-1-4083-86	13GS, 13GS-U	8-50		6000-11800
	13GS-U			
	09G2FB			
	10G2FBU			
	10G2T, 10G2BT			
	09G2BT			
TU 14-1-4627-96	10G2FBU	8-32	11500-11800	
TU 14-1-5293-95	10G2FB	8-22		

Metinvest's products from Italy and UK
Producers: Metinvest Trameal SpA, Ferriera Valsider SpA, Spartan UK Ltd.

Cert. 3.1 - 3.2	API 5L, Cert. 3.1	MSS SP75, Cert. 3.2	ASTM A860, Cert. 3.1	Thickness, mm	Width, mm*	Length, mm
L245HB	B	-	-	4-100	3200 max	4000-25000**
L290HB	X42	WPHY 42	WPHY 42			
-	X46	WPHY 46	WPHY 46			
L360HB	X52	WPHY 52	WPHY 52			
L415HB	X60	WPHY 60	WPHY 60	8-40		
L415QB	X60	WPHY 60	WPHY 60	8-80		
L450QB	X65	WPHY 65	WPHY 65	8-70		
L485QB	X70	-	WPHY 70	8-60		

* Width max/min related to thickness and heat treatment

** Max/min length related to thickness and slab availability (weight is 3-20 tonnes)

Metinvest's products from Ukraine
Producers: Azovstal I&SW, Ilyich I&SW of Mariupol

 AR – as rolled
 CR – control rolled
 N – normalized
 NR – normalized rolling
 Q&T – quenched and tempered
 TMCP – termomechanically rolled

Grade*	Thickness, mm	Italian register	Lloyds register	Germanischer Lloyds	Det Norske Veritas	DNV-GL	Bureau Veritas
A, B	6 - ≤20	AR, NR	AR, NR, TMCP	AR, CR	AR (up to 30mm), NR	NR (8 mm and up), CR (8 mm and up)	AR, NR, TMCP
	≥20 - ≤25		NR, TMCP		NR		
	≥25 - ≤40						
	≥40 - ≤50	N	N	N	-	N	N
	≥50 - ≤90						-
≥90 - 100							-
D	6 - ≤20	AR, NR	AR, NR, TMCP	CR	NR, N	CR (8 mm and up), NR (8 mm and up)	NR, TMCP
	≥20 - ≤25		NR, TMCP			CR/NR (up to 35mm), N (35-40mm)	
	≥25 - ≤40						
	≥40 - ≤50	AR, NR, N	CR, N	-	NR, TMCP, N		
	≥50 - ≤90	N	-	-	-	N	
E	6 - ≤20	N (8 mm and up), TMCP	N (8 mm and up), TMCP	N (8 mm and up), TMCP	TMCP	N (8 mm and up)	N (8 mm and up), TMCP
	≥20 - ≤25		-	-			
	≥25 - ≤40						
	≥40 - ≤50	N	-	-	-	N	
	≥50 - ≤90						
A32, AH32	6 - ≤20	NR (8 mm and up), TMCP	AR, NR (8 mm and up), TMCP	CR (8 mm and up), TMCP	NR (8 mm and up), TMCP	CR (8 mm and up), NR	NR (8 mm and up), TMCP
	≥20 - ≤25		NR, TMCP	N, TMCP			
	≥25 - ≤40						
	≥40 - ≤50	N, TMCP			-	-	N
	≥50 - ≤100	N	-	N	-	N	-
D32, DH32	6 - ≤20	NR (8 mm and up), TMCP	AR, NR (8 mm and up), TMCP	CR (8 mm and up), TMCP	NR (8 mm and up), TMCP	CR (8 mm and up), NR (8 mm and up)	NR (8 mm and up), TMCP
	≥20 - ≤25		NR, TMCP	N, TMCP			
	≥25 - ≤40						
	≥40 - ≤50	N, TMCP	-	-	N, TMCP		
E32, EH32	6 - ≤20	N (8 mm and up), TMCP	N (8 mm and up), TMCP	N (8 mm and up), TMCP	N (8 mm and up), TMCP	N (8 mm and up)	N (8 mm and up), TMCP
	≥20 - ≤25		-	-			
	≥25 - ≤40						
	≥40 - ≤50						
A36, AH36	6 - ≤20	NR (8 mm and up), TMCP	AR, NR (8 mm and up), TMCP	CR (8 mm and up), TMCP	NR (8 mm and up), TMCP	CR (8 mm and up), NR (8 mm and up)	NR (8 mm and up), TMCP
	≥20 - ≤25		NR, TMCP	N, TMCP			
	≥25 - ≤40						
	≥40 - ≤50	N, TMCP			-	-	N
	≥50 - ≤100	N	-	N	-	N	-
E36, EH36	6 - ≤20	N (8 mm and up), TMCP	N (8 mm and up), TMCP	N (8 mm and up), TMCP	N (8 mm and up), TMCP	N (8 mm and up)	N (8 mm and up), TMCP
	≥20 - ≤25		-	-			
	≥25 - ≤40						
	≥40 - ≤50						
	≥50 - ≤62	-	-	N	-	-	
D36, DH36	6 - ≤20	NR (8 mm and up), TMCP	AR, NR(8 mm and up), TMCP	CR (8 mm and up), TMCP	NR (8 mm and up), TMCP	CR (8 mm and up), NR (8 mm and up)	NR (8 mm and up), TMCP
	≥20 - ≤25		NR, TMCP	N, TMCP			
	≥25 - ≤40						
	≥40 - ≤50	N, TMCP			-	-	N
	≥50 - ≤62	-	-	N	-	N	-
A40, D40, E40, AH40, EH40, DH40	6 - ≤42	TMCP	QT (8 mm and up)	-	TMCP, QT (8 mm and up)	QT (8 mm and up)	-
	≥42 - ≤50				TMCP	-	
F40	6 - ≤42	-	-	-	QT (8 mm and up)	QT (8 mm and up)	-

* Z test available on request (for thickness min 15 mm)

Grade*	Thickness, mm	American Bureau of shipping	Russian shipping register	Russian river shipping register	Register of Ukrainian shipping	Nippon Kaiji Kyokai	Indian register
A, B	6 - ≤20	AR, CR, TMCP	AR, CR, NR, TMCP	CR, NR	AR, CR, NR	AR	AR, CR, TMCP (up to 30mm)
	≥20 - ≤25				AR, CR, NR, N		
	≥25 - ≤40						
	≥40 - ≤50						AR, CR
	≥50 - ≤90	-	-	-	-	-	-
≥90 - 100	-	-	-	-	-	-	-
D	6 - ≤20	CR, TMCP	AR (max 35mm), CR, NR, TMCP	CR, NR	CR, NR	CR	CR/TMCP (max. 30mm), N (8 mm and up)
	≥20 - ≤25				CR, NR, N		
	≥25 - ≤40						
	≥40 - ≤50	CR, TMCP, N	CR, NR, TMCP				N
	≥50 - ≤90	-	-	-	-	-	-
≥90 - 100	-	-	-	-	-	-	-
E	6 - ≤20	N (8 mm and up), TMCP	N (8 mm and up), TMCP	TMCP	N (8 mm and up), TMCP	N (8 mm and up)	TMCP (max. 30mm)
	≥20 - ≤25						
	≥25 - ≤40	TMCP					-
	≥40 - ≤50						-
	≥50 - ≤90	-	-	-	-	-	-
≥90 - 100	-	-	-	-	-	-	-
A32, AH32	6 - ≤20	CR (8 mm and up), TMCP	CR (8 mm and up), TMCP	TMCP	CR (8 mm and up), TMCP	CR (8 mm and up)	N (8 mm and up), TMCP
	≥20 - ≤25				N, TMCP		
	≥25 - ≤40						
	≥40 - ≤50	N, TMCP				N	
	≥50 - ≤100	-	-	-	-	-	-
D32, DH32	6 - ≤20	CR (8 mm and up), TMCP	CR (8 mm and up), TMCP	TMCP	CR (8 mm and up), TMCP	CR (8 mm and up)	N (8 mm and up), TMCP
	≥20 - ≤25				N, TMCP		
	≥25 - ≤40						
	≥40 - ≤50	N, TMCP				N	
E32, EH32	6 - ≤20	N (8 mm and up), TMCP	N (8 mm and up), TMCP	TMCP	N (8 mm and up), TMCP	N (8 mm and up)	N (8 mm and up), TMCP (max. 30mm)
	≥20 - ≤25						
	≥25 - ≤40						
	≥40 - ≤50						N
A36, AH36	6 - ≤20	CR (8 mm and up), TMCP	CR (8 mm and up), TMCP	TMCP	CR (8 mm and up), TMCP	CR (8 mm and up)	N (8 mm and up), TMCP
	≥20 - ≤25				N, TMCP		
	≥25 - ≤40						
	≥40 - ≤50	N, TMCP				N	
	≥50 - ≤100	-	-	-	-	-	-
E36, EH36	6 - ≤20	N (8 mm and up), TMCP	N (8 mm and up), TMCP	TMCP	N (8 mm and up), TMCP	N (8 mm and up)	N (8 mm and up), TMCP (max. 30mm)
	≥20 - ≤25						
	≥25 - ≤40						
	≥40 - ≤50						N
	≥50 - ≤62	-	-	-	-	-	-
D36, DH36	6 - ≤20	CR (8 mm and up), TMCP	CR (8 mm and up), TMCP	TMCP	CR (8 mm and up), TMCP	CR (8 mm and up)	N (8 mm and up), TMCP
	≥20 - ≤25				N, TMCP		
	≥25 - ≤40						
	≥40 - ≤50	N, TMCP				N	
	≥50 - ≤62	-	-	-	-	-	-
A40, D40, E40, AH40, EH40, DH40	6 - ≤42	-	TMCP, QT (8 mm and up)	TMCP	TMCP	-	-
	≥42 - ≤50	-					
F40	6 - ≤42	-	-	-	-	-	-

* Z test available on request (for thickness min 15 mm)

Metinvest's products from Italy
Producers: Metinvest Trameal SpA, Ferriera Valsider SpA

 AR - as rolled
 CR - control rolled
 N - normalized

Grade**	Thickness, mm	Italian register (RINA)	Lloyds register (LR)	Germanischer Lloyds (GL)	Det Norske Veritas (DNV)	Bureau Veritas (BV)	American Bureau of shipping (ABS)
A, AH32*, AH36*	4 - ≤8	AR, N	AR, N	AR, N	AR, N	AR, N	AR, N
	≥8 - ≤35	AR, CR, N	AR, N	AR, CR, N	AR, N, CR	AR, CR, N	AR, CR, N
	≥35 - ≤40	CR, N	N	CR, N	N, CR	CR, N	CR, N
	≥40 - ≤50	N		N		N	N
	≥50 - 60	N		N	N	N	-
B	4 - ≤8	AR, N	N	AR, N	AR, N	AR, N	AR, N
	≥8 - ≤35	AR, CR, N		AR, CR, N	AR, N, CR	AR, CR, N	AR, CR, N
	≥35 - ≤40	CR, N		CR, N	N, CR	CR, N	CR, N
	≥40 - ≤50	N		N		N	N
	≥50 - 60	N		N	N	N	-
D, DH32, DH36	4 - ≤8	N	N	N	N	N	N
	≥8 - ≤35	CR, N		CR, N	AR (25 mm), CR, N	CR, N	CR, N
	≥35 - ≤40	CR, N		CR, N	CR, N	CR, N	CR, N
	≥40 - ≤50	N		N	N	N	N
	≥50 - 60	N		N	N	N	N
E	4 - ≤50	N	N	N	-	N	N
	≥50 - 60	-	N	N	-	-	-
EH32, EH36	4 - ≤50	N	N	N	N	N	N
	≥50 - 60	-	N	N	-	-	-
AH27S	4 - ≤25	-	AR, N	-	AR, N	-	-
	≥25 - 60	-	N	-	N	-	-
DH27S	4-60	-	N	-	N	-	-
EH27S	4-60	-	N	-	-	-	-
FH32, FH36	5-35	N	-	-	-	-	-
510LF	8-35	N	-	-	-	-	-

* AR only up to 25 mm

** Z test available on request (for thickness min 15 mm)

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МИР

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