



**ORI**  
MARTIN







ORI Martin S.p.A, the parent company of the ORI Martin Group, is a modern electric arc furnace steel mill that produces special steels for various applications, mainly in the automotive sector (bolts, suspension springs, torsion bars, steering and transmission components), mechanics, energy and construction.

ORI Martin offers as standard more than 200 different steel grades.

The continuous growth supported by massive investment plans over several years guarantees the constant development of products and long lasting customer relations.



## STEEL SHOP

- > Electric arc furnace (EAF) Consteel Technology®, heat size 100 ton
- > Two ladle furnaces and one vacuum degassing station
- > One 5-strand-billet-caster for sections 140x140 and 160x160 mm, 10 m radius electromagnetic stirrers



## ROLLING MILLS

- > Walking beam furnaces
- > 29 stands
- > Optical control device for billets
- > Calibration block for tight tolerances for diameters up to 38 mm
- > Rolling at low temperature
- > Non destructive testing (NDT) along the rolling line
- > Wire rod Ø 5,5 - 42 mm
- > Bars Ø 15 - 130 mm
- > Stelmor cooling bed for Ø 5,5 - 21,5 mm
- > Garret cooling for Ø 22 - 42 mm
- > Bars cooling bed





## ANNEALING

- > 1 continuous furnace and a battery of 6 bell furnaces with neutral atmosphere for spheroidized annealing of wire rod
- > 1 furnace with neutral atmosphere for annealing of bars

## PICKLING OF WIRE ROD

- > Chemical pickling
- > Shot blasting
- > Phosphate and soap coating
- > Phosphate and polymer coating



## STRAIGHTENING AND CONTROLS OF BARS

- On line controls for:
- > Surface defects by eddy current
  - > Dimensional tolerances
  - > Antimix
  - > Ultrasonic control



## HEAT TREATMENTS OF BARS

- Two induction lines for:
- > Quenching and tempering
  - > Normalizing
  - > Stress relieving





## BILLETS

Dimensions:  
 Cross section side 140x140 mm - 160x160 mm  
 Length 3.500 ÷ 11.900 mm  
 Length tolerances -100 ÷ +100 mm

Labelling:  
 1 metallic label with quick response "QR" code including  
 Heat number, casting & strand number, billet number  
 Painting of one end upon request

## HOT ROLLED BILLETS

Cross section side 30 ÷ 100 mm according to EN 10031  
 Length 5.500 ÷ 13.000 mm  
 Length tolerances -0 ÷ +200 mm  
 Fixed lengths upon request  
 Bundle weight 4.000 kg max  
 Packaging: 5 metallic straps  
 Additional lifting straps upon request  
 Labelling: one heat, acid and weather resistant label for each bundle



## BAR

ROUND  
 Ø 15 ÷ 130 mm tolerances according to EN 10060  
 Ø 15 ÷ 38 mm tighter tolerances upon request  
 Length 3.000 ÷ 12.000 mm

SQUARE for drawing  
 Cross section side 32 ÷ 102 mm according to EN 10059  
 Standard lengths 5.500 ÷ 12.000 mm  
 Length tolerances -0 ÷ +200 mm  
 Fixed lengths upon request

FLAT for drawing  
 Width 52 ÷ 201 mm according to EN 10058  
 Thickness 11 ÷ 52 mm according to EN 10058  
 Standard lengths 5.500 ÷ 12.000 mm  
 Length tolerances -0 ÷ +200 mm  
 Fixed lengths upon request

Bundle weight 4.000 kg max

Packaging: 5 metallic straps  
 Additional lifting straps upon request

Labelling: one heat, acid and weather resistant label for each bundle



## WIRE ROD

Coils weight and dimensions:  
 - Ø 5,5 ÷ 42 mm tolerances according EN 10108 A and B  
 - Ø 15 ÷ 38 mm tighter tolerances upon request

1800 kg max: (A) Ø internal = 800 mm min.  
 (B) Ø external = 1.350 mm max.  
 (L) Width = 1.200 mm max.

2400 kg max: (A) Ø internal = 830 - 1.000 mm  
 (B) Ø external = 1.100 - 1.300 mm  
 (L) Width = 2.100 mm max.

Coil packaging:  
 - 1.800 kg max, single coil banded with wire at 4 points  
 - 3.600 kg max, bundle of two single coils banded with wire at 4 points  
 - 2.400 kg max, single coil banded with wire at 4 points

A different coil weight can be agreed at the placing of the order

Labelling: one heat, acid and weather resistant label for each coil



## INDUCTION TEMPERED WIRE

ORI Martin Group is proud to produce IT Wire in the Brescia plant. For the first time, this type of product is manufactured in the same plant. The process starts with the melting of steel and ends with induction tempered wire.

IT wire responds to the needs of cold coiled springs for high tensile strength and fatigue resistance.

Pre-tempered wire can also be used in other different critical manufacturing fields.

Steel grade 54SiCr6 - SAE 9254

Coil weight and dimensions: Ø 7 ÷ 18 mm tolerance +/-0,04 mm  
 Out of round < 75% od dimensional tolerances  
 Coil weight 1500 – 2400 kg  
 (A) Ø internal §= 1700 mm min.  
 (B) Ø external =2350 mm max.  
 (L) Width = 450 mm max

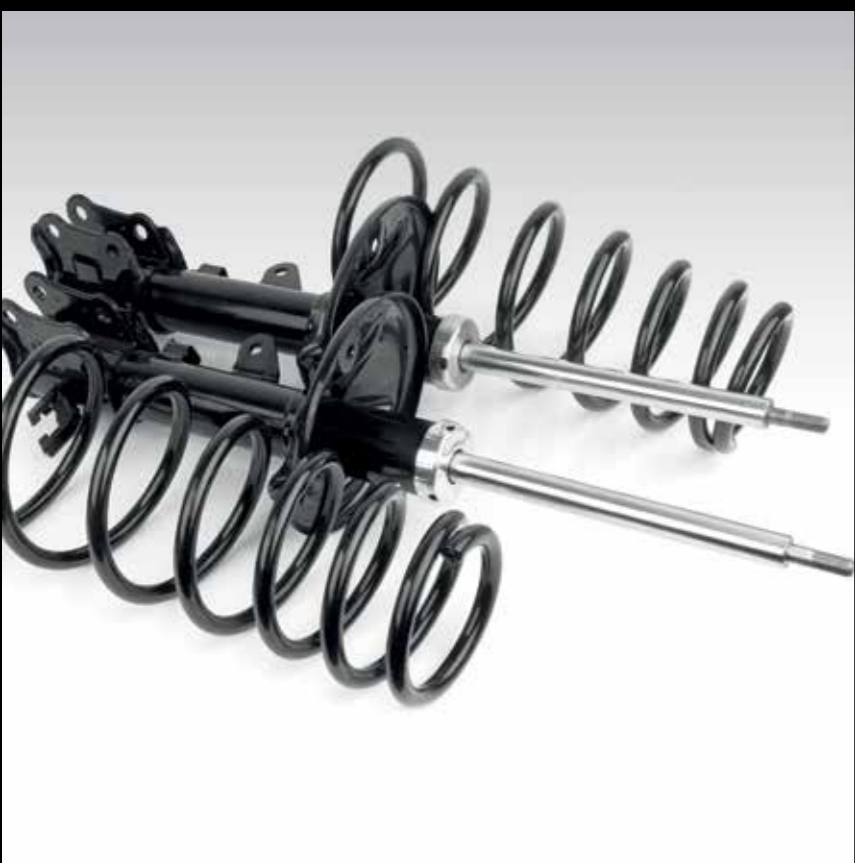
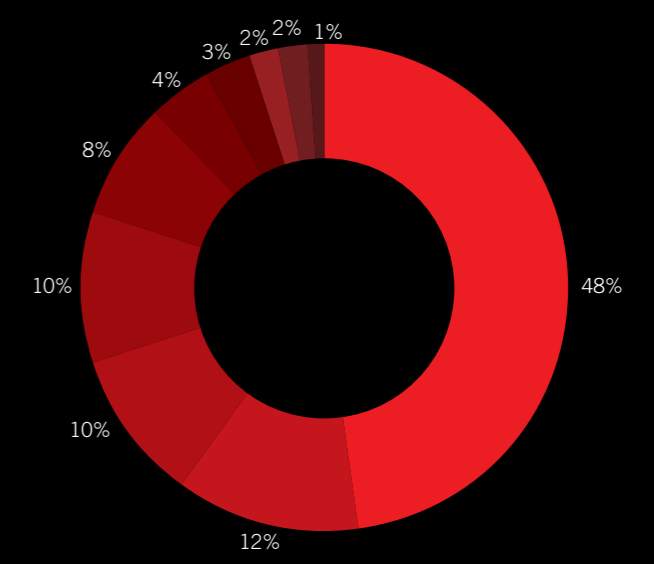
Coil packaging: single coil banded with 8 straps and paper wrapping





# APPLICATIONS

■ STEELS FOR COLD HEADING	48 %
■ STEELS FOR ALLOYED SPRINGS AND STABILIZER BARS	12 %
■ STEELS FOR CASE HARDENING AND SURFACE HARDENING	10 %
■ STEELS FOR QUENCHING AND TEMPERING	10 %
■ STEELS FOR SPECIAL DRAWING	8 %
■ CONSTRUCTION STEELS	4 %
■ STEELS FOR TOOLS AND 100CR6	3 %
■ STEELS FOR WELDING	2 %
■ STEELS WITH IMPROVED MACHINABILITY	2 %
■ HIGH CARBON STEELS	1 %



# SPECIAL STEELS FOR COLD HEADING

The main producers of bolts and screws in Europe and overseas choose to use ORI Martin special steels, because they are very well suited for cold heading processes not only for their high ductility, but also for their attitude to the tempering process. Further treatments of the wire rod e.g.: spheroidized annealing, chemical pickling, shot blasting, phosphate, soap and polymer coating are carried out internally within the ORI Martin Group in order to guarantee product quality as well as flexible and punctual deliveries.



Steel grade	Corresponding standard			Average chemical composition								
	Steel grade	Werkstoff	ORI Martin	C	Mn	Si	Cr	Ni	Mo	B ppm	V	
C	C4C	1.0303	SC08X1	0,04	0,30	0,03						
	C8C	1.0213	SC08X5	0,08	0,30	0,03						
	C10C	1.0214	SC10X1	0,10	0,40	0,05						
	C15C	1.0234	SC15S5	0,15	0,50	0,10						
	C20C	1.0411	SC20S2	0,20	0,60	0,10						
B	15B2	1.5501	S15B11	0,13	0,55						30	
	17B2	1.5502	S18B12	0,17	0,70						20	
	23B2	1.5508	S21B11	0,21	0,80		0,15				20	
	28B2	1.5510	S25B12	0,27	0,80		0,25				20	
	33B2	1.5514	S34B11	0,32	0,80		0,15				20	
	35B2	1.5511	S35B11	0,37	0,75						30	
	45B2	1.5513	S45B11	0,45	0,75		0,15				30	
Mn B	23MnB4	1.5535	S21B13	0,22	0,95		0,30				20	
	30MnB4	1.5526	S30B11	0,30	0,80		0,15				20	
	36MnB4	1.5537	S35B16	0,35	0,90		0,15				20	
Mo B	30MoB1	1.5408	S30B15	0,30	0,90		0,20			0,10	20	

Steel grade	Corresponding standard			Average chemical composition								
	Steel grade	Werkstoff	ORI Martin	C	Mn	Si	Cr	Ni	Mo	B ppm	V	
Cr Ni Mo	39NiCrMo3	1.6510	S38H41	0,38	0,70		0,80	0,80	0,20			
	34NiCrMo6	1.6582	S34H61	0,34	0,70		1,50	1,50	0,20			
Cr B	25CrB3	/	S25BC1	0,25	0,65		0,70				40	
	32CrB4	1.7076	S30BC	0,32	0,80		1,10				20	
	36CrB4	1.7077	S36BC	0,36	0,80		1,10				20	
Cr	34Cr4	1.7033	S34C41	0,34	0,70		1,00					
	37Cr4	1.7034	S37C44	0,37	0,70		1,00					
	41Cr4	1.7035	S41C4	0,41	0,70		1,00					
Mn Cr B	27MnCrB5-2	1.7182	S27B51	0,27	1,25		0,45				20	
	33MnCrB5-2	1.7185	S31B51	0,33	1,35		0,45				20	
Cr Mo	34CrMo4	1.7220	S34L41	0,34	0,70		1,00		0,20			
	42CrMo4	1.7225	S42L41	0,42	0,70		1,00		0,20			
Cr Mo B	31CrMoB2-1	1.7272	S30B18	0,30	1,00		0,50		0,12	20		
	32CrMoB4	/	S32BL1	0,32	0,80		1,00		0,12	20		
Cr Mo V	21CrMoV5-7	1.7709	S21K51	0,21	0,60		1,35		0,68			0,28
	40CrMoV4-6	1.7711	B40K41	0,40	0,60		1,00		0,60			0,30





## SPECIAL STEELS FOR ALLOYED SPRINGS AND STABILIZER BARS

ORI Martin is able to satisfy the most stringent specifications concerning micro cleanliness, surface decarburization and absence of surface defects. Our special steel grades are designed for the production of automotive suspension springs (in both hot and cold forming process), stabilizer bars and railway fastening solutions.



Steel grade	Corresponding standard			Average chemical composition					
	Steel grade	Werkstoff	ORI Martin	C	Mn	Si	Cr	Ni	V
Si	38Si7	1.5023	D38S71	0,38	0,70	1,70			
	48Si7	1.5021	D50S72	0,48	0,65	1,80			
	51Si7	1.5025	D50S71	0,50	0,70	1,70			
	55Si8	/	D55S81	0,55	0,80	1,90			
Mn	38Mn6	/	B36M61	0,29	1,50	0,20			
Si Cr	54SiCr6	1.7102	D55S51	0,54	0,80	1,40	0,70		
	56SiCr7	1.7106	D55S71	0,55	0,70	1,70	0,20		
	61SiCr7	1.7108	D60F81	0,61	0,85	1,80	0,30		
Si Cr V	45CrSiV6-2	1.8151	D45F61	0,45	0,80	1,50	0,60		0,15
	54SiCrV6	/	D56F71	0,54	0,70	1,40	0,70		0,10
	61CrSiV5	1.2243	D61F72	0,61	0,75	0,85	1,15		0,10
	65CrSiV7	/	D65F81	0,65	0,85	1,50	0,80		0,23
Mn Si Cr V	45MnSiCrV6	/	D45F66	0,45	1,30	1,40	0,60		0,15
Cr	55Cr3	1.7176	D55C31	0,55	0,80	0,30	0,80		
	50CrV4	1.8159	D50X41	0,50	0,80	0,30	1,00		0,15
Cr V	58CrV4	1.8161	D58X41	0,58	0,90	0,30	1,00		0,15
	52SiCrNi5	1.7117	D52R51	0,52	0,85	1,35	0,85	0,60	

# SPECIAL STEELS FOR QUENCHING AND TEMPERING

ORI Martin steel grades for quenching and tempering meet the most demanding requirements concerning micro cleanliness and tight chemical analysis. They are valued for applications in the automotive and mechanical industry.



Steel grade	Corresponding standard			Average chemical composition							
	Steel grade	Werkstoff	ORI Martin	C	Mn	Cr	Ni	Mo	B ppm	S	V
C	C30E	1.1178	BC30L1	0,30	0,65						
	C35E	1.1181	BC35L1	0,35	0,65						
	C40E	1.1186	BC40L1	0,40	0,65						
	C45E	1.1191	BC45L1	0,45	0,65						
	C50E	1.1206	BC50L1	0,50	0,75						
	C55E	1.1203	BC55L1	0,55	0,75						
	C60E	1.1221	BC60L1	0,60	0,75						
	CF53	/	C55L1E	0,54	0,55						
Mn	28/38Mn6	/	B36M61	0,29	1,50						
Mn Cr Ni	28MnCrNi5-2 + B	TK28	W28RB1	0,30	1,30	0,50	0,50		30		
Cr	34Cr4	1.7033	S34C41	0,34	0,75	1,00					
	37Cr4	1.7034	S37C44	0,37	0,75	1,00					
	37CrS4	/	S36C41	0,37	0,75	1,00				0,03	
	41Cr4	1.7035	S41C41	0,41	0,75	1,00					
	41CrS4	/	S41C41	0,41	0,75	1,00					0,03
	46CrB2	1.7075	S45B13	0,45	0,75	0,45					
Cr Mn	36MnCr5	/	B36U51	0,36	0,95	1,15					
CrMnB	27MnCrB5-2	1.7182	S27B51	0,27	1,25	0,45				20	
	33MnCrB5-2	1.7185	S31B51	0,33	1,35	0,45				20	

Steel grade	Corresponding standard			Average chemical composition							
	Steel grade	Werkstoff	ORI Martin	C	Mn	Cr	Ni	Mo	B ppm	S	V
Cr Mo	25CrMo4	1.7218	C25L41	0,25	0,70	1,00		0,20			
	34CrMo4	1.7220	B35L41	0,35	0,80	1,00		0,20			
	42CrMo4	1.7225	B42L41	0,42	0,80	1,00		0,20			
	L7	/	S42L47	0,42	0,80	1,00	0,20	0,20			
	50CrMo4	1.7228	S50L41	0,50	0,65	1,00		0,20			
Cr Mo V	50CrMoV4	/		0,50	0,65	1,00		0,20			0,15
	31CrMoV9	1.8519	B31K92	0,30	0,55	2,50		0,20			0,15
	40CrMoV4-6	1.7711	B40K41	0,40	0,60	1,00		0,60			0,30
Ni Cr Mo	40NiCrMo2	/	B40H21	0,40	0,70	0,50	0,60	0,20			
	30CrNiMo8	1.6580	B30H82	0,30	0,65	2,00	2,00	0,40			
	39NiCrMo3	1.6510	B38H41	0,39	0,65	0,80	0,85	0,20			
	36CrNiMo4	1.6511	B38H4	0,40	0,60	0,90	1,00	0,20			
	34CrNiMo6	1.6582	B34H6	0,34	0,65	1,50	1,50	0,25			
	SAE 8740	/	40H21L	0,40	0,80	0,50	0,50	0,20			
	SAE 4340	/		0,40	0,70	0,80	1,80	0,25			
	45SiCrMo6	1.8062		0,45	0,70	0,60		0,25			
	31CrMo12	1.8515		0,31	0,60	3,00		0,40			
	36NiCrMo16	1.6773		0,35	0,60	1,80	3,85	0,35			
Ni Cr Mo V	60NiCrMoV12-4	1.2743		0,57	0,60	1,15	2,80	0,35			0,10



# SPECIAL STEELS FOR CASE AND SURFACE HARDENING

The homogeneity of the chemical composition together with an adequate micro cleanliness, enable ORI Martin special steels to guarantee constant results in the final processes of our customers. The surface hardening treatment achieves the wear resistance requested by hubs, shafts, gears and similar products.



Steel grade	Corresponding standard			Average chemical composition						
	Steel grade	Werkstoff	ORI Martin	C	Mn	Cr	Ni	Mo	S	V
C	C10E	1.1121	CC10X1	0,10	0,50					
	C15E	1.1141	CC15L1	0,15	0,50					
Cr	17Cr3	1.7016	C15C31	0,17	0,70	0,90				
Mn Cr	16MnCr5	1.7131	C16U51	0,16	1,20	1,00				
	16MnCrS5	1.7139	C16U52	0,16	1,20	1,00			0,03	
	20MnCr5	1.7147	C20U51	0,20	1,25	1,10				
	20MnCrS5	1.7149	C20U52	0,20	1,25	1,10			0,03	
	27MnCr5	/	C27U51	0,27	1,25	1,20				
Cr Mo	12CrMo4	1.7201	S12L41	0,12	0,75	1,05		0,20		
	18CrMo4	1.7243	C18L41	0,18	0,70	1,00		0,20		
	15-20CrMo5	1.7264		0,20	1,05	1,25		0,25		
	13CrMo4-5	1.7335		0,13	0,70	0,93		0,50		
	25MoCr4	1.7325		0,26	0,75	0,50		0,45		
Ni Cr	25CrMo4	1.7218	C25L41L	0,25	0,75	1,05		0,22		
	19CrNi5	/	C19R51L	0,20	0,90	1,00	1,00			
	10NiCr6	/	C10R61L	0,10	0,70	1,05	1,28			
	12NiCr3	/	C12R31	0,12	0,60	0,60	0,70			
	16NiCr11	/	C16R11	0,15	0,45	0,75	2,75			

Steel grade	Corresponding standard			Average chemical composition						
	Steel grade	Werkstoff	ORI Martin	C	Mn	Cr	Ni	Mo	S	V
Ni Cr	16CrNi4	1.5714	C16R41	0,16	0,60	1,00	1,00			
	17CrNi6	1.5918	C16R61	0,16	0,60	1,50	1,50			
	15NiCr13	1.5752		0,17	0,55	0,75	3,25			
	14NiCr14	/		0,17	0,55	0,75	3,50			
	18MnNiCr4	/	C17H22	0,18	1,23	0,45	0,45	0,06		
Ni Cr Mo	20NiCrMo2	1.6523	C20H21	0,20	0,70	0,50	0,60	0,20		
	17NiCrMo6-4	1.6566	C18H51	0,18	0,70	1,00	1,30	0,20		
	20MnNiCrMo3-3	1.6527	C20H23	0,20	0,85	0,50	0,80	0,20		
	13CrNiMo7-6	/	C13H71	0,14	0,50	1,40	1,60	0,25		
	18CrNiMo7-6	1.6587	C18H71	0,18	0,70	1,65	1,55	0,30		
Cr Mo V	20NiCrMoS2-2	1.6526	C19H21	0,20	0,80	0,52	0,55			
	31CrMoV9	1.8519	B31K92	0,31	0,55	2,50		0,20		0,15
Mn Ni Cr Mo	23MnNiMoCr5-4	1.6758	C23H54	0,23	1,30	0,50	1,00	0,50		
	23MnNiCrMo5-2	1.6541	C23H53	0,23	1,25	0,50	0,55	0,25		
	15Mo3	1.5415	C15D31	0,16	0,65			0,30		
	20MnCrNi4-2 + B	/	S20HB1	0,22	1,10	0,60	0,50	0,10		
	SAE 4720	/	C20H22	0,20	0,60	0,45	1,05	0,20		
27MnSi5	1.0412	C27E51	0,27	1,50						



# MICROALLOYED AFP SPECIAL STEELS

These grades are also available with Nb and Ti.

Steel grade	Corresponding standard			Average chemical composition				
	Steel grade	Werkstoff	ORI Martin	C	Mn	Si	S	V
MnV	20MnV6	1.5217	C20MV6L	0,19	1,50		0,04	0,15
	30MnVS6	1.1302	B30MV6L	0,29	1,40		0,04	0,16
	38MnVS6	1.1303	B38MV6L	0,38	1,40		0,04	0,16
	46MnVS6	1.1304		0,46	1,40		0,04	0,16
	46MnVS3	1.1305		0,46	0,80		0,04	0,16
	55MnV6	/		0,55	0,85	0,20		0,15

# SPECIAL STEELS 100Cr6

ORI Martin produces 100Cr6 from continuous casting suitable for mechanical applications such as rollers, rings, shafts and cams.

Steel grade	Corresponding standard			Average chemical composition							
	Steel grade	Werkstoff	ORI Martin	C	Mn	Si	Cr	Ni	Mo	S	V
Cr	100Cr6	1.3505	K99C61	1,00	0,30	0,20	1,40				
	100CrS6	/	K99C63	1,00	0,30	0,20	1,40			0,03	





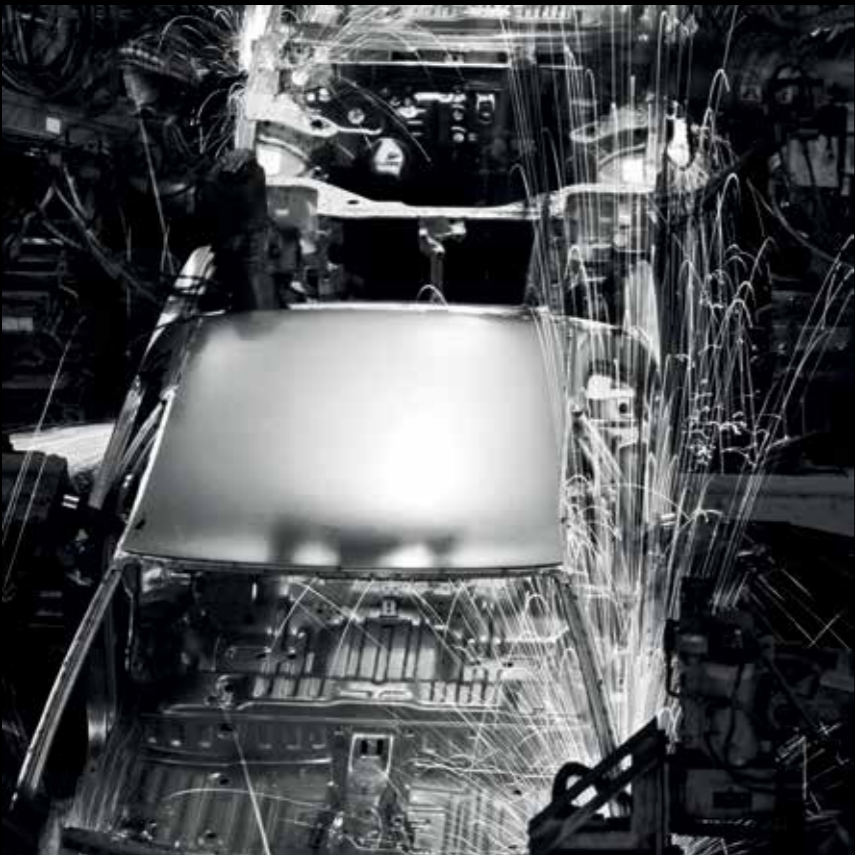


# SPECIAL STEELS FOR WELDING

Our customers appreciate the flexibility of ORI Martin in the production of welding steel grades with a customized chemical composition available in cast sizes of only 80 Tons.

The feeding of the electric arc furnace with accurate selected scrap together with the vacuum degassing treatment, casting with two electromagnetic stirres and rolling with controlled cooling, enables ORI Martin to produce welding steel grades with low contents of sulphur, copper and nitrogen, homogenous structure and best drawability.

In addition, our skill in the annealing treatment completes the technical possibilities for ORI Martin to fully satisfy the requests of producers of low and medium alloy welding wire.



Corresponding standard		Average chemical composition						
Steel grade	ORI Martin	C	Mn	Si	Cr	Ni	Mo	Cu
T20Mo	AFF2D1B	0,10	1,00	0,12			0,50	
T15CrMo4	AFF2L1B	0,11	0,75	0,17	1,20		0,55	
11NiMn5-4	AFF2N1B	0,11	1,00	0,10		0,90		
T20	AFF201B	0,10	1,00	0,10				
T20Si	AFF204B	0,10	1,10	0,17				
T25	AFF302B	0,11	1,55	0,20				
T25Mo	AFF3D1B	0,13	1,50	0,12			0,50	
T25Ni	AFF3N2B	0,10	1,00	0,17		2,20		
T25NiMo4	AFF3Q2B	0,12	1,55	0,17		0,90	0,52	
T30	AFF401B	0,12	1,95	0,07				
T30Mo	AFF4D1N	0,11	1,95	0,15			0,55	
S2NiCu	AFF2W1B	0,10	1,10	0,20		0,73		0,25
X5CrMo3	AX5C31C	0,07	0,63	0,24	2,40		0,95	
X5CrMo6	AX5C51C	0,05	0,55	0,40	5,75		0,55	
SGNi2-5	ECO1N1C	0,08	1,10	0,52		2,20		
CO2Mo	ECO2D1C	0,09	1,10	0,60			0,45	
CO2CrMo1Si	ECO2L1C	0,09	1,00	0,65	1,17		0,50	
CO2NiMo	ECO2N2C	0,09	1,10	0,60		0,90	0,25	
CO2NiMo8	ECO2N4C	0,07	1,70	0,40		2,00	0,35	
Mn3NiCrMo	ECO2H1C	0,08	1,40	0,68	0,48	0,58	0,20	
Mn3Ni1CrMo	ECO2J1C	0,08	1,63	0,60	0,30	1,48	0,25	
Mn4Ni2CrMo	ECO2N3C	0,09	1,83	0,78	0,35	1,85	0,55	
Mn4Ni2-5CrMo	ECO2H8L	0,13	1,90	0,85	0,55	2,40	0,55	
G4Mo	ECO3D1N	0,08	1,90	0,73			0,45	
G3Ni1	ECO2W3C	0,08	1,43	0,83	0,28	0,79		0,25



# SPECIAL STEELS WITH HIGH CARBON CONTENT

Steel grade	Corresponding standard			Average chemical composition				
	Steel grade	Werkstoff	ORI Martin	C	Mn	Si	Cr	V
C	C60D2	1.1228	MC6001	0,60	0,60	0,20		
	C68D2	1.1232	MC6801	0,68	0,60	0,20		
	C70D2	1.1251	MC7201	0,70	0,60	0,20		
	C80D2	1.1255	MC8201	0,80	0,60	0,20		
	C86D2	1.1265	MC8501	0,86	0,60	0,20		
	C92D2	1.1282	MC9201	0,93	0,60	0,20		
Cr	C80+Cr	/	MC8001	0,80	0,60	0,20	0,20	
Cr V	C82+CrV	/	MC8002	0,82	0,75	0,22	0,25	0,07



# SPECIAL STEELS FOR TOOLS

ORI Martin produces special tool steels which are highly homogenous both in chemical composition and micro cleanliness, which enables the final customer to achieve a constant and reliable tool performance.



Steel grade	Corresponding standard			Average chemical composition								
	Steel grade	Werkstoff	ORI Martin	C	Mn	Si	Cr	Ni	Mo	S	V	
Cr	102Cr6	1.2067	K99C62	1,00	0,30	0,20	1,40					
	125Cr2	1.2002	K125C2L	1,25	0,30	0,25	0,50					
Cr V	38CrV3	/	B38X3	0,36	0,60	0,30	0,80				0,15	
	51CrV4	1.2241	B50X4	0,50	0,90	0,25	1,00				0,15	
	59CrV4	1.2242	B59X4	0,58	0,90	0,25	1,00				0,15	
	115-130CrV3	1.2210	K115X	1,15	0,30	0,20	0,60				0,10	
SiMo	55SiMo8	/	D55SM1	0,55	0,90	1,85			0,40	0,02	0,20	
MoV	73MoV5	1.2381	B73DV1	0,74	0,50	1,15			0,55		0,20	
Si Cr V	45SiCrV6	1.2249	D45F6	0,45	0,60	1,50	1,40				0,10	
CrNiMo	34CrNiMo6	1.6582	B34H61	0,34	0,70		1,50	1,50	0,23			
CrMoV	45CrMoV7	1.2328		0,45	0,90		1,80		0,27		0,05	
	60CrMoV4	/	B60K41	0,63	0,90	0,25	1,05		0,20		0,15	

# SPECIAL STEELS WITH IMPROVED MACHINABILITY FREE CUTTING STEEL

Sulphides homogeneously distributed over the entire cross section without segregation, enable ORI Martin free cutting steels to achieve the best mechanical properties together with the best machinability and minimal tool wear.

Steel grade	Corresponding standard			Average chemical composition				
	Steel grade	Werkstoff	ORI Martin	C	Mn	Si	S	P
	11SMn30	1.0715	Z09Z21	0,08	1,1	0,05	0,3	0,05
	11SMn37	1.0736	Z09Z31	0,08	1,2	0,05	0,38	0,05
	SAE 1117	/	Z09Z11	0,16	1,1	0,2	0,1	0,02
	35S20	1.0726	Z35S20	0,35	0,9	0,2	0,2	0,02
	36SMn14	1.0764	Z35S12	0,35	1,5		0,14	
	44SMn28	1.0762	Z45Z11	0,44	1,5		0,29	
	45S10	/	Z45S10	0,42	0,98		0,1	
	46S20	1.0727	Z45S20	0,45	0,9	0,2	0,2	0,02







## CUSTOMER SERVICE

Production of each steel grade according to customer's technical specification.

Strong commitment in R&D activities for continuous improvement of quality and processes, combined with constant technical assistance to customers.

Production flexibility.









## OUR GREEN WAY OF STEEL PRODUCTION

### CIRCULAR ECONOMY

- 90% natural resource saving
- 80% of CO<sub>2</sub> reduction
- 100% metal scrap recycling

### CONSTEEL TECHNOLOGY

- Reduction of electric arc furnace dust dispersion
- Heat recycling
- Acoustic impact reduction
- Co exothermic post combustion

### I RECOVERY

- 12 mln € Total Investment
- 52 GWh annual heat recovery capacity
- 25 MWh daily electric energy production in summer (equal to 700 families electrical consumption throughout the year)
- 26 GWh annual thermal production in winter (equal to 2000 family consumption)
- Annual reduction of 10'000 t CO<sub>2</sub>

### OXYGEN PIPELINE

- 5 Km of direct connection to Air Liquide underground oxygene pipeline
- 1250 Truck trip per year reduction
- 160 kg/year particulate matter reduction
- 2 t/year NOx reduction
- 270 t/year CO<sub>2</sub> reduction





## WATER SAVING

Over 3 mln € Investments over last 3 years

High pressure and high temperature water recycling circuit implementation

Energy and water saving  
(-64% fresh water consumption in the last 20 years)



## EAF GAS TREATMENT

More than 7 mln € investments on new filter system

More than 2 mln € spent every year for eaf exhaust gas cleaning

Active carbon injection treatment

100% recycling of eaf dust

Emission of particulates <1ppm (limits at 5ppm)



## NOISE REDUCTION

1,5 mln € investment over last 3 years

Steel and stone wool insulation, over 10 cm thickness panel

More than 20'000 sqm of surface



## RENEWABLE ENERGY

1 mln € investment in 2018

1 MW installed

8'800 t CO<sub>2</sub> saving over the next 20 years



## PRODUCT CARBON FOOTPRINT

According to ISO 14064-1:2018

Specific CO<sub>2</sub> emissions per unit of product.

Items certified:

- Billets
- Hot rolled /annealed Wire rod
- Hot rolled / annealed / Q&T Bars



## PURCHASING POWER AGREEMENT

Production will start in 2020 year

10% of electric energy from renewable sources

53 MW solar power plant to be installed

Equal to a 50k trees wood CO<sub>2</sub> reduction



# ORI MARTIN GROUP



Steel mill and rolling mill for coils and bars

Via C. Canovetti, 13 - 25128 Brescia - Italy  
Tel. +39 030 39991 - Fax +39 030 2000924  
info@orimartin.it

Round, flats and square bars, billets for forging

Via Domenico Ghidoni, 169 - 25035 Ospitaletto (BS) - Italy  
Tel. +39 030 6841411 - Fax +39 030 643385  
ospitaletto@orimartin.it



Sales office for Germany, Austria and Switzerland

Mülheimer Str. 100 - 47057 Duisburg - Deutschland  
Tel. +49 203 31877 0  
stahlvertrieb@ori-martin.de



Sales office for France, Belgium and Luxemburg

22B Rue Dupont des Loges - 57000 Mez - France  
Tel. +33 87361090 - Fax +33 87361120  
ori.martin.france@wanadoo.fr



Cold finishing of bars and coils

Via Kennedy, 64 - 25033 Cologne (BS) - Italy  
Tel. +39 0307058311 - Fax +39 0307050490  
info@orimartin.it



Cold finishing of bars and coils

Via Verdi, 26 - 28060 S. Pietro Mosezzo (NO) - Italy  
Tel. +39 0321530611 - Fax +39 0321530627  
info@novacciai.it



**MECCANICA TRAFILATI**  
MARTIN

Deep hole drilling for bars

Via Kennedy, 54/56 - 25033 Cologne (BS) - Italy  
Tel. +39 030 2531240 - Fax +39 030 2538091  
info@orimartin.it



**SIDERURGICA LATINA**  
MARTIN

Drawing and stranding of medium-high carbon wires for mechanical springs, PC wire and PC strand

Via Oger Martin, 21 - 03024 Ceprano (BS) - Italy  
Tel. +39 0775 91991 - Fax +39 0775 9199222  
info@slmspa.com



**TENSION TECHNOLOGY**  
MARTIN

Design and construction of post tensioning system

Via A. da Giussano, 9 - 20011 Corbetta (MI) - Italy  
Tel. +39 02 97277811 - Fax +39 02 97277523  
info@ttmsrl.it



**SAPES**  
DRIVING COMPONENTS

Cold forging and hot forging of driving components for the automotive, the construction machinery and the agricultural vehicles

Via E. Miglio, 11 - 38089 - Storo (TN) - Italy  
Tel.: +39 0465 686100 - Fax +39 0465 686474  
sapes@sapes.eu



**TRAFILERIA LARIANA**  
Drawing Steels

Cold drawn wires in coils and bars

Via Giuseppe Parini, 1T - 23890 Barzago (LC) - Italy  
Tel. +39 031 850438 - Fax +39 031 852479  
info@trafilerialariana.com



**AUTOTRASPORTI**  
BETTELLI RUGGERO

Transport of hot rolled steel and scrap in Italy

Via C. Canovetti, 13 - 25128 Brescia - Italy  
Tel. +39 030 3999210 - Fax +39 030 2000924  
ruggero.bettelli@orimartin.it

Information and pictures of this book are not binding and may be subject to changes.





**O.R.I. Martin**

Acciaieria e Ferreria di Brescia S.p.A.

Via C. Canovetti, 13 - 25128 Brescia - Italia

T. +39 030 39991 - F. +39 030 2000924

[info@orimartin.it](mailto:info@orimartin.it) - [www.orimartin.it](http://www.orimartin.it)