COMPANY PROFILE

WELDING CONSUMABLES

PITTARC
WELDING WIRE EXPERIENCE

An INTERNATIONAL REPUTATION

The Pittini Group, with its main headquartered in Osoppo (Udine), is a steel group with a strong international focus: **30 production and distribution facilities** located in Italy and Central Europe make the Pittini Group an important player at European level.

Ferriere Nord
Osoppo (UD), Italy
- Meltshop with electric arc furnace
- Wire rod rolling mill
- Rebar rolling mill
- Jumbo® rolling mill
- Cold steel processing
- Lattice girder production
- Granella® and Siderlime® production

Siderpotenza
Potenza, Italy
- Meltshop with electric arc furnace
- Rebar rolling mill
- Granella® production

Ceprano (FR), Italy
- Distribution centre

Giammoro (ME), Italy
- Distribution centre

Acciaierie di Verona
Verona, Italy
- Meltshop with electric arc furnace
- Wire rod rolling mill
- Rebar rolling mill
- Cold steel processing

Nave (BS), Italy
- Cold steel processing

La Veneta Reti
Loreggia (PD), Italy
- Cold steel processing

SIAT
Gemona del Friuli (UD), Italy
- Cold drawn flat wire production

Majano (UD), Italy
- Cold rolled wire production

Pittarc - Division of Siat
Osoppo (UD), Italy
- Welding wires production plant

BSTG
Linz, Austria
- Sales office

Graz, Austria
- Cold steel processing

Kovinar
Jesenice, Slovenia
- Cold steel processing

STEELAG
Kralupy, Cezch Rep.
- Cold steel processing

Bánovce, Slovakia
- Cold steel processing

Drat Pro
Kralupy, Czech Rep.
- 3D bending wire

Pittini Deutschland
Aichach, Germany
- Sales office

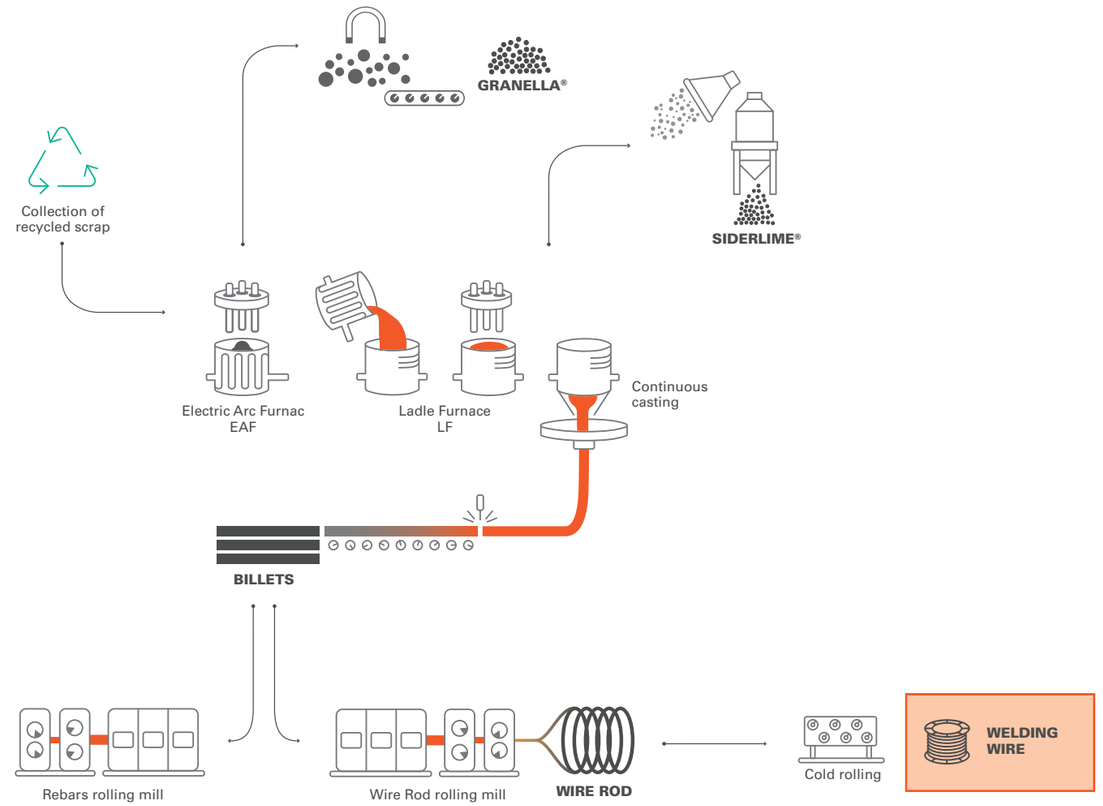
Pittini Siderprodukte
Schlieren, Swiss
- Sales office

Verona Servizi Logistici
Verona, Italy
- Services

PITTARC: a COMPANY within the PITTINI GROUP

PITTARC is the brand dedicated to welding wires from Siat, a company belonging to the **Pittini Group**, an international leader with over 60 years' experience in the production of long steel products. Thanks to fifty years of expertise, the Pittarc division has developed cutting-edge technologies and processes that position it as a benchmark in the sector, guaranteeing the highest quality standards through the exclusive use of wire rod sourced from the Group's steelworks.

The Group's production follows a strategic approach based on **vertical integration**: from steel production through to further manufacturing stages to the final wire rolling and drawing process.
PITTARC welding wires are designed for use in the mechanical engineering industry, pressure vessels, piping (particularly in the oil and gas sector), the energy sector, and heavy and light structural steelwork.



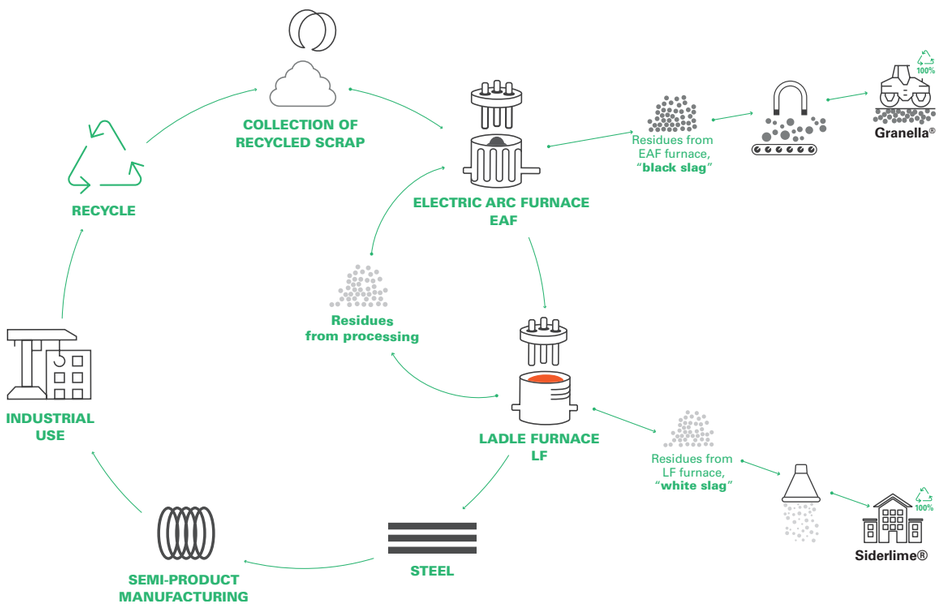
A CONSTANT COMMITMENT to QUALITY and ENVIRONMENT

Pittarc welding wires are the result of a production process that is carefully monitored at every stage. As a result, they meet the **highest quality standards** and guarantee top-level performance even in the most demanding applications. PITTARC products undergo rigorous testing of their chemical, mechanical and technological properties to ensure a high level of reliability, in line with their intended applications and current regulations.

The Quality Management System is UNI EN ISO 9001:2015 compliant, and the Environment Management System UNI EN ISO 14001:2015 compliant and they are certified by the notified body IGQ.

PITTARC welding wires also bear the **CE mark** in accordance with the European Regulation No. 305/2011 and the EN 13479:2004 standard. Furthermore, they have been certified by many official control bodies such as ABS, BV, DB, DNV, GL, LRS, RINA, TÜV, CWB, FBTS.

Circular economy and the Zero Waste programme
As part of the Pittini Group, Pittarc produces its own wire from wire rod obtained from ferrous scrap melted in an electric arc furnace (EAF). This allows the company to control the entire production cycle and guarantee quality, traceability and consistent performance.
In addition to quality, Pittarc is actively committed to environmental sustainability: the Pittini Group operates the Zero Waste programme, which aims to minimise waste and make the most of every residue throughout the entire supply chain, promoting an efficient and circular industrial model.



SAW wires

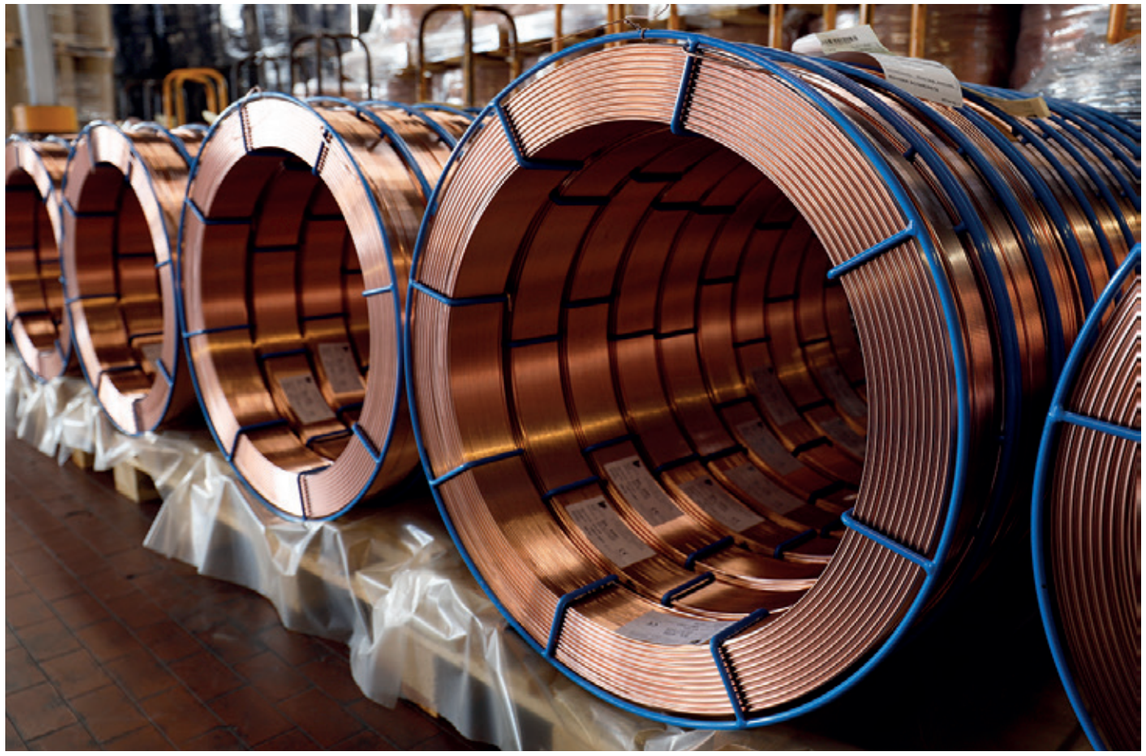
PITTARC's **Submerged Arc Welding** wires are the result of a highly innovative process, both for the applied procedure and the machinery.

We produce **more than twenty different grades** of welding wires suitable for joining carbon and low alloyed steels and can be used in a wide range of applications such in the oil and gas sector, offshore applications, pressure vessels, wind towers, heavy frameworks.

The SAW wires are available in the **diameter range from 1.2 mm to 5.0 mm** and are available in different packaging solutions:

- 25 kg, 27 kg, 90 and 100 kg spools;
- 450 to 1,200 kg coils;
- 300 to 400 kg metal spools;
- 300 to 1,000 kg drums.

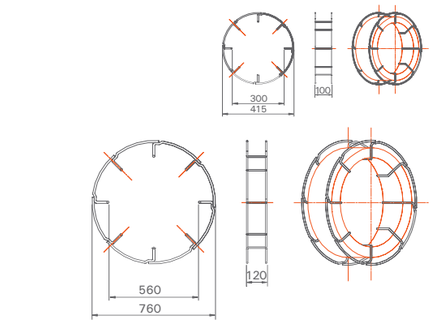
Several welding fluxes are available to be used in combination with our wires to cover a wide range of applications. All fluxes are available in standard 25 kg bags or 600÷1200 kg big bags.



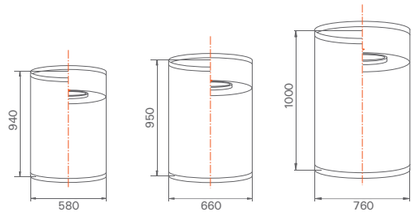
Type	Classification	Approvals	Chemical analysis							
			%	C	Mn	Si	Ni	Cr	Mo	Cu*
S1	ISO 14171-A S1 AWS A5.17 / A5.23 EL12	CE - TÜV - DB	min	0.06	0.35	-	-	-	-	-
			max	0.10	0.60	0.10	0.15	0.15	0.15	0.30
S1-R	ISO 14171-A S1 AWS A5.17 / A5.23 EL12	CE - TÜV	min	0.06	0.35	-	-	-	-	-
			max	0.10	0.60	0.10	0.10	0.10	0.05	0.15
S2	ISO 14171-A S2 AWS A5.17 / A5.23 EM12K	CE - TÜV - DB	min	0.07	1.00	0.10	-	-	-	-
			max	0.15	1.20	0.15	0.15	0.15	0.15	0.30
S2-R	ISO 14171-A S2 AWS A5.17 / A5.23 EM12K	CE - TÜV - DB	min	0.07	1.00	0.10	-	-	-	-
			max	0.15	1.20	0.15	0.10	0.12	0.10	0.12
S2Si	ISO 14171-A S2Si AWS A5.17 / A5.23 EM12K	CE - TÜV - DB	min	0.07	0.80	0.15	-	-	-	-
			max	0.15	1.20	0.35	0.15	0.15	0.15	0.30
S2Si2	ISO 14171-A S2Si2 AWS A5.17 / A5.23 EM13K	CE	min	0.07	0.90	0.40	-	-	-	-
			max	0.15	1.30	0.60	0.10	0.10	0.10	0.20
S3	ISO 14171-A S3 AWS A5.17 / A5.23 EH10K	CE - TÜV - DB	min	0.07	1.30	0.05	-	-	-	-
			max	0.15	1.70	0.15	0.15	0.15	0.15	0.30
S3Si	ISO 14171-A S3Si AWS A5.17 / A5.23 EH12K	CE - TÜV - DB	min	0.08	1.50	0.20	-	-	-	-
			max	0.12	1.85	0.35	0.15	0.15	0.15	0.30
S4	ISO 14171-A S4 AWS A5.17 / A5.23 EH14	CE - TÜV - DB	min	0.10	1.75	-	-	-	-	-
			max	0.15	2.20	0.10	0.15	0.15	0.15	0.30
S2Mo	ISO 14171-A S2Mo ISO 24598-A SMo AWS A5.23 EA2	CE - TÜV - DB	min	0.08	0.95	0.05	-	-	0.45	-
			max	0.15	1.20	0.20	0.15	0.15	0.65	0.30
S3Mo	ISO 14171-A S3Mo AWS A5.23 EA4	CE - TÜV - DB	min	0.08	1.30	0.05	-	-	0.45	-
			max	0.15	1.70	0.20	0.15	0.15	0.65	0.30
S4Mo	ISO 14171-A S4Mo AWS A5.23 EA3	CE - TÜV - DB	min	0.08	1.75	0.05	-	-	0.45	-
			max	0.15	2.15	0.20	0.15	0.15	0.65	0.30
S4MoSi	ISO 14171-A SZ AWS A5.23 EA3K	CE - TÜV	min	0.07	1.70	0.50	-	-	0.40	-
			max	0.12	2.10	0.80	0.15	0.15	0.60	0.25
SH2	ISO 14171-A S2Ni1Cu AWS A5.23 EG	CE - TÜV - DB	min	0.08	0.90	0.15	0.65	0.15	-	0.40
			max	0.12	1.10	0.35	0.90	0.40	0.15	0.65
S2Cr1Mo	ISO 24598-A S CrMo1 AWS A5.23 EB2	CE - TÜV	min	0.11	0.85	0.05	-	1.00	0.45	-
			max	0.14	1.00	0.15	0.15	1.30	0.65	0.10
S1Cr2Mo1	ISO 24598-A S CrMo2 AWS A5.23 EB3	CE - TÜV - DB	min	0.12	0.40	0.05	-	2.35	0.90	-
			max	0.15	0.70	0.25	0.10	2.60	1.05	0.20
S2Ni1	ISO 14171-A S2Ni1 AWS A5.23 ENi1	CE - TÜV	min	0.09	0.80	0.05	0.80	-	-	-
			max	0.12	1.25	0.25	1.20	0.10	0.10	0.20
S2Ni2	ISO 14171-A S2Ni2 AWS A5.23 ENi2	CE - TÜV	min	0.07	0.90	0.05	2.10	-	-	-
			max	0.11	1.15	0.25	2.40	0.10	0.10	0.15
S2Ni3	ISO 14171-A S2Ni3 AWS A5.23 ENi3	CE - TÜV	min	0.07	0.90	0.05	3.15	-	-	-
			max	0.12	1.15	0.25	3.60	0.10	0.10	0.15
S3Ni1Mo0,2	ISO 14171-A S3Ni1Mo0,2 AWS A5.23 ENi5	CE - TÜV	min	0.10	1.70	0.05	0.80		0.45	-
			max	0.15	1.80	0.25	1.00	0.20	0.65	0.30
S3Ni1Mo	ISO 26304-A S3Ni1Mo AWS A5.23 EF3	CE - TÜV	min	0.08	1.30	0.15	0.80	-	0.15	-
			max	0.12	1.60	0.30	1.00	0.15	0.30	0.15
S3Ni2½CrMo	EN ISO 26304-A S3Ni2,5CrMo AWS A5.23 EG (~AWS A5.23 EM4)	CE - TÜV	min	0.07	1.30	0.10	2.20	0.50	0.40	-
			max	0.10	1.60	0.25	2.60	0.75	0.70	0.15
S3TiB	ISO 14171-A SZ AWS A5.23 EG	CE - TÜV	%	C	Mn	Si	Mo	Ti	B	Cu*
			min	0.06	1.50	0.20	-	0.13	0.009	-
			max	0.10	1.60	0.35	0.05	0.19	0.016	0.10
S3MoTiB	ISO 14171-A S2MoTiB AWS A5.23 EA2TiB	CE - TÜV - DB	min	0.06	1.15	0.20	0.45	0.12	0.010	-
			max	0.08	1.25	0.30	0.60	0.16	0.016	0.12

* Copper content including copper coating.

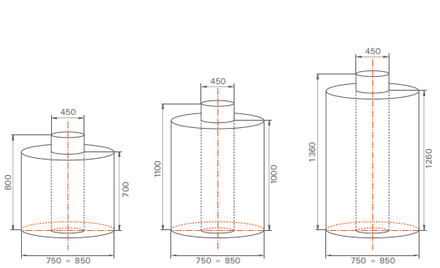
SAW Packaging



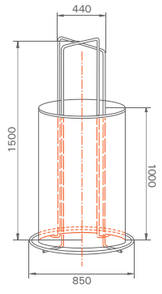
Spool			
Inner diameter	**Outer diameter**	**Width**	**Net weight**
300 mm	415 mm	100 mm	25 Kg
300 mm	415 mm	100 mm	27 Kg
EN ISO 544 : B450			
560 mm	760 mm	120 mm	90 Kg
560 mm	760 mm	120 mm	100 Kg



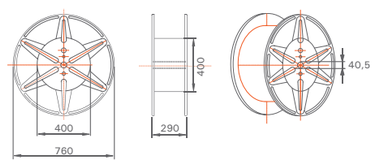
Drum		
Diameter	**Height**	**Net weight**
580 mm	940 mm	380 Kg
660 mm	950 mm	550 Kg
760 mm	1,000 mm	800 Kg



Coil		
Diameter	**Height**	**Net weight**
750 ÷ 850 mm	700 mm	700 Kg
750 ÷ 850 mm	1,000 mm	1,000 Kg
750 ÷ 850 mm	1,260 mm	1,000 Kg



Stem frame		
Diameter	**Height**	**Net weight**
750 ÷ 850 mm	1,500 mm	1,000 Kg
750 ÷ 850 mm	1,000 mm	700 Kg



Metal spool			
Inner diameter	**Outer diameter**	**Width**	**Net weight**
400 mm	760 mm	290 mm	300 ÷ 400 Kg
EN ISO 544 : S760E			

SAW fluxes

FL164B

Classification	ISO 14174-S A FB 1 55 AC H5 AWS A5.17 / A5.23: F7A8-EM12K (S2) / F8A8/F7P8-EH12K (S3Si) / F8A4/F7P4-EA2-A2 (S2Mo) F7A10/P10-ENi1-Ni1 (S2Ni1) / F8A10/F7P10-ENi2-Ni2 (S2Ni2) / F8A10/P10-ENi3-Ni3 (S2Ni3) F8A8/P8-ENi5-Ni5 (S3Ni1Mo0,2) / F9A8/P8-EF3-F3 (S3Ni1Mo) F11A8/P8~EM4-M4 (S3Ni2½CrMo) F8P0-EB2R-B2R (S2Cr1Mo) / F8P0-EB3R-B3R (S1Cr2Mo1)

Fluoride-basic flux with high basicity index and low impurities level for high performance application. As a result of low oxygen level in the weld metal high toughness at low temperature and uniform mechanical properties are achieved. Particularly suitable for critical applications of thick section materials when there is demand on high impact toughness values at very low temp (-60° C or below). Generally used on fine grain structural steels, high tensile fine grain steel such as S690QL1, N-A-XTRA 70, boiler and vessel steels.

FL165B

Classification	ISO 14174: S A FB 1 55 AC H5 (EN 760: SA FB 1 55 AC) AWS A5.17 / A5.23: F7A8/P8-EM12(K) / F7A8-EH10K / F 8 A 8 / F7P8-EH12K / F8A4/F7A4-EA2-A2 F7A10/P10-ENi1-Ni1 / F8A10/F7P10-ENi2-Ni2 / F8A15/P15-ENi3-Ni3 / F8A8-ENi5-Ni5 F9A8/P8-EF3-F3 / F9P8-EM2mod.-M2 / F11A8/P8-EM4 mod.-M4 / F8P0-EB2R-B2R F8P0-EB3R-B3R

A fluoride-based flux with high basicity and low impurity levels. Consistent mechanical properties with high low-temperature toughness. FL165B is suitable for DC and AC welding using single-wire and tandem processes. Suitable for structural steels with Ys > 420 MPa, offshore applications with Ys > 460 MPa, as well as BS 4360 Grade 50 D and S355 2G3. It is also used for fine-grained steels such as S690QL1, N-A-XTRA 70 and steels for boilers and PRESSURE vessels.

FL182B

Classification	ISO 14174-S A AR 1 76 AC H5 AWS A5.17 / AWS A5.23: F7AZ-EL12 (S1) / F7AZ-EM12K (S2) / F7A0-EM12K (S2Si) AWS A5.23: F8A0-EA2-A2 (S2Mo) / F8PZ-EB2-B2 (S2Cr1Mo)

Designed for all SAW processes and welding of ordinary carbon-manganese and low alloy steel with yield strength up to 355 N/mm² in combination with wire grades S1, S2, S2Mo and S2Cr1Mo. The flux is suitable for production of membrane wall panels for power plants, beam fabrication, general construction and LPG manufacturing at high travel speed.

FL188F

Classification	ISO 14174-S A AB 1 67 AC H5 AWS A5.17 / A5.23: F7A0-EL12 (S1) / F7A4/P4-EM12K (S2) / F7A4/P4-EM12K (S2Si) / F8A5/F7P4-EH12K (S3Si) F8A2/P2-EA2-A2 (S2Mo) / F8A2/F7P2-EG-G (SH2) F8A5-ENi5-Ni5 (S3Ni1Mo0,2) F9A4-EF3-F3 (S3Ni1Mo)

Agglomerated semi-basic flux suitable for carbon alloy steel welding in single and multi-pass technique and in single or multi-wire application. The weld metal produced meets good mechanical properties and high toughness at low temperature. Good slag removal in fillet and grove welds. The main applications of this flux are: boilers works, pipes, ship-buildings, structural steelworks, tanks, pressure vessels, offshore applications, etc.

FL190B

Classification	ISO 14174-S A AB 1 67 AC H5 AWS A5.17 / A5.23: F7A2-EL12 (S1) / F7A4/F6P4-EM12K (S2) / F7A6/P6-EM12K (S2Si) / F8A6/F7P6-EH12K (S3Si) F8A4-EG-G (SH2) / F8A4/P4-EA2-A2 (S2Mo) / F9A4/P4-EA4-A3 (S3Mo) F7A10/P10-ENi1-Ni1 (S2Ni1) / F8A10/F7P10-ENi2-Ni2 (S2Ni2) / F9A5/P5-EF3-F3 (S3Ni1Mo) F8P4-EB2-B2 (S2Cr1Mo)

Agglomerated semi-basic flux suitable for fine-grained carbon and low alloy steels welding in single or multi-pass technique, in single or multi-wire applications. Combined with appropriate wire types it reaches excellent mechanical features and high toughness at low temperature. The most suited applications are pipe production, structural steelworks, boiler works, ship-building and pipe-lines in steel grade up to API- 5L X70.

FL193B

Classification	ISO 14174-S A AB 1 66 AC H5 AWS A5.17 / A5.23: F7A2-EM12K (S2) / F7A2-EM12K (S2Si) / F8A4/F7P4-EH12K (S3Si) / F8A2/P2-EA2-A2 (S2Mo) F8A2/P2-EA4-A4 (S3Mo) / F9A0-EA3K-A3 (S4MoSi) F9A2-EF3-F3 (S3Ni1Mo) F6TA0-EM12K (S2) / F7TA2-EM12K (S3Si) / F9TA2-EA2 (S2Mo) / F9TA2-EF3 (S3Ni1Mo) F8TA6-EG (S3TiB) / F9TA6-EA2TiB (S3MoTiB)

Agglomerated semi-basic flux for joint welding high quality steel pipes for oil and gas. Suitable for single and multi-wire (up to 5 wires) in two-run technique. As a result of low hydrogen content (<5 ml/100 g in the weld metal) and oxygen levels as well as uniform metallurgical behavior, constant mechanical properties and very good toughness at low temperatures, especially in combination with wires containing titanium and boron, are obtained.

FL200B

Classification	ISO 14174 – S A CS 3 CCrMo AC

An agglomerated, active SAW flux of the calcium-silicate type (alloy composition: C, Cr, Mo), designed for hard surfacing and welded joints using low-alloy wires. FL200B exhibits consistent chemical reactions, typical of alloyed fluxes.

Wire	Heat treatment	Hardness
Layer 1	S2 As welded	270 HB
Layer 2	S2 As welded	330 HB
Layer 3	S2 As welded	340 HB

GMAW WIRES

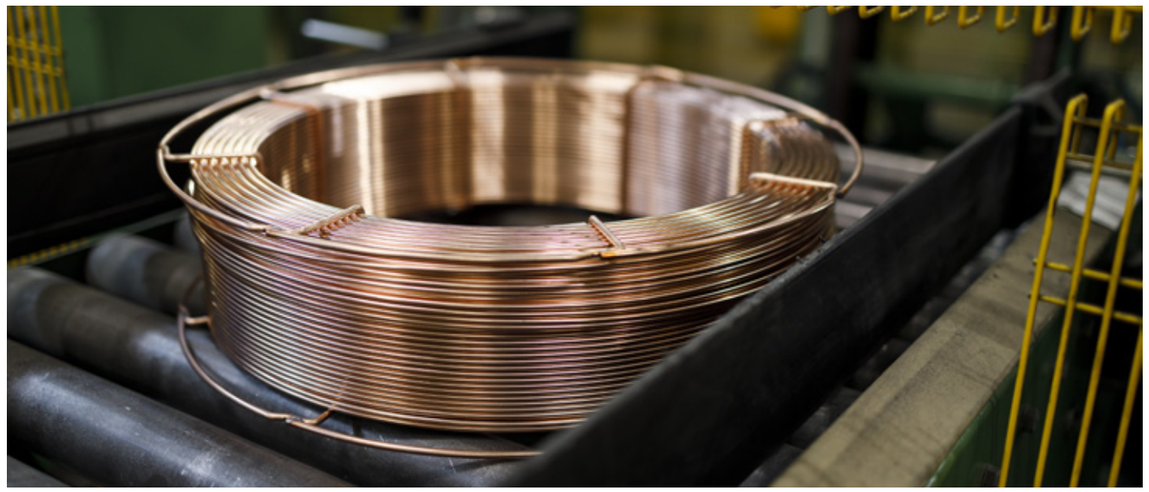
Pittarc GMAW wires are manufactured from low impurity and gas content wire rods to obtain **welding seams with excellent mechanical properties and toughness**.
The available gas shielded welding wires are suitable to join carbon steel as well as low alloy steels and can be used in a wide range of applications such as medium and heavy metal constructions, i.e. automotive frames, tanks, pressure vessels, ship building.

GMAW welding wires are manufactured in the **diameters ranging from 0.6 to 4.0 mm** and are available in different packaging solutions:
- spools of 5 kg, 15 kg, 16 kg and 18 kg;
- drums of 250 kg, 350 kg and 450 kg.

In addition to standard copper coated GMAW wire products are also available copper-free, the eco-friendly line named **GREEN-ARC**, or in the **INNOV-ARC** version, which is the new line of wires intended for the most challenging applications.

INNOV-ARC wires, whether tinned or untinned, undergo an additional treatment that improves their surface, making it particularly smooth.
The **advantages** ensured by this treatment are:
- consistent and high welding performance;
- perfect arc stability with low friction through liner;
- excellent feeding also with very long feed distances and high wire feed speeds;
- extremely low overall spatters;
- optimal welding seam appearance;
- low nozzle wear;
- reduced equipment downtime for liner cleaning.

This surface treatment can be applied to any type of wire, regardless of its chemical composition, diameter, packaging and surface coating.



G3

MIG/MAG (GMAW) gas shielded welding wires to join non-alloy carbon steels.

Classification: EN ISO 14341-A-G 38 2 M21 2Si1 - AWS A5.18 ER70S-3

Chemical analysis

%	C	Mn	Si	Ni	Cr	Mo	Cu[1]
min	0,06	0,90	0,50				
max	0,14	1,30	0,75	0,15	0,15	0,15	0,30

Mechanical properties[2]

Yeld strenght (Rp0,2)	≥ 400 Mpa
Tensile strenght (Rm)	≥ 480 Mpa
Elongation (A5)	≥ 22%
Impact energy (ISO-V KV)	47 J @ -40 °C

Approvals: CE Marking

G6

MIG/MAG (GMAW) gas shielded welding wires to join non-alloy carbon steels.

Classification: EN ISO 14341-A G 42/46 4 M21 3Si1 - EN ISO 14341-A G 42 2 C1 - AWS A5.18 ER70S-6

Chemical analysis

%	C	Mn	Si	Ni	Cr	Mo	Cu[1]
min	0,06	1,40	0,80				
max	0,14	1,60	1,00	0,15	0,15	0,15	0,30

Mechanical properties[2]

Yeld strenght (Rp0,2)	510 Mpa
Carico di rottura (Rm)	570 Mpa
Elongation (A5)	29%
Impact energy (ISO-V KV)	85 J @ -40 °C

Approvals: ABS, BV, DB, DNV, LRS, RINa, TÜV - CE Marking

G9

MIG/MAG (GMAW) gas shielded welding wire Mn-Si-alloyed of non-alloyed carbon steels to join carbon steels.

Classification: EN ISO 14341-A G 46 5 M21 4Si1 - EN ISO 14341-A G 46 2 C1 - AWS A5.18 ER70S-6

Chemical analysis

%	C	Mn	Si	Ni	Cr	Mo	Cu[1]
min	0,06	1,60	0,80				
max	0,14	1,85	1,15	0,15	0,15	0,15	0,30

Mechanical properties[2]

Yeld strenght (Rp0,2)	535 Mpa
Tensile strenght (Rm)	600 Mpa
Elongation (A5)	27%
Impact energy (ISO-V KV)	55 J @ -50 °C

Approvals: ABS, BV, DB, DNV, LRS, RINa, TÜV - CE Marking

GMo

MIG/MAG (GMAW) gas shielded welding wires to joint creep-resistant steels with service temperature up to 500° C.

Classification: EN ISO 14341-A G 46 4 M21 2Mo - AWS A5.28 ER70S-A1 - G50 4 M21 2Mo

Chemical analysis

%	C	Mn	Si	Ni	Cr	Mo	Cu[1]
min	0,08	0,90	0,30			0,40	
max	0,12	1,30	0,70	0,15	0,15	0,60	0,35

Mechanical properties[2]

Yeld strenght (Rp0,2)	500 Mpa
Tensile strenght (Rm)	620 Mpa
Elongation (A5)	21%
Impact energy (ISO-V KV)	60 J @ -40 °C

Approvals: CE Marking

G9Mo

MIG/MAG (GMAW) gas shielded welding wires of creep-resistant steels with a service temperature of up to 500 °C.

Classification: EN ISO 14341-A G 50 4 M21 4Mo - AWS A5.28 ER80S-D2 - AWS A5.28 ER90S-D2

Chemical analysis

%	C	Mn	Si	Ni	Cr	Mo	Cu[1]
min	0,07	1,70	0,50			0,40	
max	0,12	2,10	0,80	0,15	0,15	0,60	0,25

Mechanical properties[2]

Yeld strenght (Rp0,2)	590 Mpa
Tensile strenght (Rm)	690 Mpa
Elongation (A5)	23%
Impact energy (ISO-V KV)	80 J @ -40 °C

Approvals: CE Marking

GH2

MIG/MAG (GMAW) gas shielded welding wires of weather resisting steels such as COR-TEN, Itacor, Patinax, Dillicor and so on.

Classification: EN ISO 14341-A G 50 4 M21 Z - AWS A5.28 ER80S-G

Chemical analysis

%	C	Mn	Si	Ni	Cr	Mo	Cu[1]
min	0,06	1,30	0,70	0,70	0,25		0,30
max	0,10	1,60	1,00	0,85	0,40	0,10	0,50

Mechanical properties[2]

Yeld strenght (Rp0,2)	590 Mpa
Tensile strenght (Rm)	660 Mpa
Elongation (A5)	24%
Impact energy (ISO-V KV)	70 J @ -40 °C

Approvals: CE Marking

G3NI1

MIG/MAG (GMAW) welding wires with 0.9% Ni-alloyed of fine-grained and low alloy nickel steels with high impact toughness down to -50° C.

Classification: EN ISO 14341-A G 46 5 M21 3Ni1 - AWS A5.28 ER80S-Ni1

Chemical analysis

%	C	Mn	Si	Ni	Cr	Mo	Cu[1]
min	0,07	1,00	0,60	0,80			
max	0,12	1,20	0,80	1,00	0,15	0,15	0,20

Mechanical properties[2]

Yeld strenght (Rp0,2)	490 Mpa
Tensile strenght (Rm)	580 Mpa
Elongation (A5)	28%
Impact energy (ISO-V KV)	80 J @ -50 °C

Approvals: CE Marking

GTH

MIG/MAG (GMAW) gas shielded welding wires Cr-Ni-Mo alloyed of high strength steels.

Classification: EN ISO 16834-A G 62 5 M21 Mn3NiCrMo - AWS A5.28 ER100S-G

Chemical analysis

%	C	Mn	Si	Ni	Cr	Mo	Cu[1]
min	0,08	1,60	0,60	0,50	0,55	0,25	
max	0,10	1,80	0,80	0,60	0,65	0,30	0,30

Mechanical properties[2]

Yeld strenght (Rp0,2)	700 Mpa
Tensile strenght (Rm)	770 Mpa
Elongation (A5)	20%
Impact energy (ISO-V KV)	70 J @ -50 °C

Approvals: DB, TÜV - CE Marking

GTA

MIG/MAG (GMAW) gas shielded welding wires Cr-Ni-Mo alloyed of high strength steels with low temperature impact requirements.

Classification: EN ISO 16834-A G 69 5 M21 Mn3Ni1CrMo - AWS A5.28 ER110S-G

Chemical analysis

%	C	Mn	Si	Ni	Cr	Mo	Cu[1]
min	0,08	1,60	0,50	1,40	0,30	0,24	
max	0,11	1,80	0,70	1,60	0,40	0,30	0,35

Mechanical properties[2]

Yeld strenght (Rp0,2)	820 Mpa
Tensile strenght (Rm)	870 Mpa
Elongation (A5)	19%
Impact energy (ISO-V KV)	60 J @ -50 °C

Approvals: DB, TÜV - CE Marking

GT2

MIG/MAG (GMAW) gas shielded welding wires of high strength steels and fine-grained structural steels with a yield strength of up to 890 MPa.

Classification: EN ISO 16834-A G 89 4 M21 Mn4Ni2,5CrMo - AWS A5.28 ER120S-G

Chemical analysis

%	C	Mn	Si	Ni	Cr	Mo	Cu[1]
min	0,08	1,60	0,50	2,30	0,30	0,40	
max	0,13	2,10	0,80	2,80	0,60	0,65	0,25

Mechanical properties[2]

Yeld strenght (Rp0,2)	960 Mpa
Tensile strenght (Rm)	1040 Mpa
Elongation (A5)	16%
Impact energy (ISO-V KV)	60 J @ -40 °C

Approvals: CE Marking

GCR1Mo

MIG/MAG (GMAW) Cr-Mo solid wire for creep resistant steels like A-387 Grade 11 & 12, A 335 Grade P11 or similar materials.

Classification: EN ISO 21952-A G Z - EN ISO 21952-B-G 1CM - AWS A5.28 ER80S-B2

Chemical analysis

%	C	Mn	Si	Ni	Cr	Mo	Cu[1]
min	0,07	0,40	0,40		1,20	0,40	
max	0,12	0,70	0,70	0,20	1,50	0,65	0,35

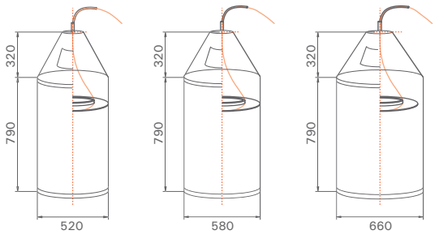
Mechanical properties[3]

Yeld strenght (Rp0,2)	520 Mpa
Tensile strenght (Rm)	630 Mpa
Elongation (A5)	24%
Impact energy (ISO-V KV)	100 J @ -10 °C

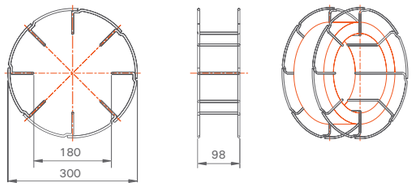
Approvals: CE Marking

[1] Copper content including copper coating.
[2] Typical mechanical properties obtained with shielded gas EN ISO 14175 M21.
[3] Typical mechanical properties with shielded gas EN ISO 14175 M13 after PWHT at 690 °C/ 1 h.

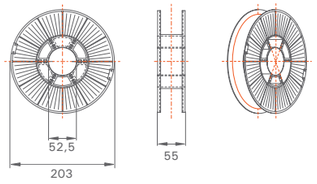
GMAW packaging



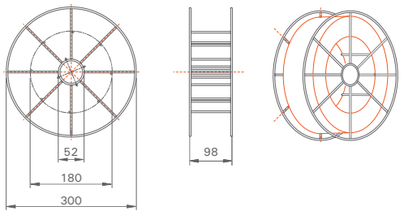
Drum			
Wire diameter	**Drum diameter**	**Height**	**Net weight**
0,8 ÷ 1,2 mm	520 mm	790 mm	250 Kg
≥ 1.0 mm	580 mm	790 mm	350 Kg
≥ 1.0 mm	660 mm	790 mm	450 - 500 Kg



Wire basket spool			
EN ISO 544 : B300			
Inner diameter	**Outer diameter**	**Width**	**Net weight**
180 mm	300 mm	98 mm	15 -16 - 18 Kg



Plastic spool			
EN ISO 544 : D200			
Hole diameter	**Outer diameter**	**Width**	**Net weight**
52,5 mm	203 mm	55 mm	5 Kg



Wire basket spool			
EN ISO 544 : BS300			
Hole diameter	**Outer diameter**	**Width**	**Net weight**
52 mm	300 mm	98 mm	15 -16 - 18 Kg

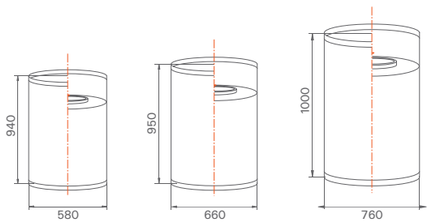
Copper Wires

The **copper-coated wire process** is a manufacturing technology that provides additional protection to drawn steel wires. This allows them to be widely used in several applications.

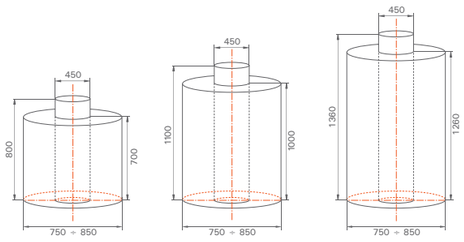
Thanks to the technology developed by the Pittini Group, the production of copper-coated wire is implemented through **cold rolling, in a single step from wire rod to finished product**. This guarantees constant control and quality both of the raw material, the wire rod that is produced in the Group's rolling mills, and the entire production cycle.

Copper wires are available in **various packaging** solutions up to a weight of 1,500 kg for the highest productivity.

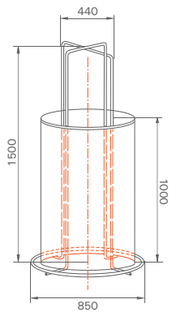
Packaging copper-coated wires



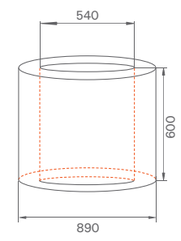
Drum		
Diameter	**Height**	**Net weight**
580 mm	940 mm	380 Kg
660 mm	950 mm	550 Kg
760 mm	1,000 mm	800 Kg



Coil		
Diameter	**Height**	**Net weight**
750 ÷ 850 mm	700 mm	700 Kg
750 ÷ 850 mm	1,000 mm	1,000 Kg
750 ÷ 850 mm	1,260 mm	1,000 Kg



Stem frame		
Diameter	**Height**	**Net weight**
750 ÷ 850 mm	1,500 mm	1,000 Kg
750 ÷ 850 mm	1,000 mm	700 Kg



Spooled coil			
Inner diameter	**Outer diameter**	**Height**	**Net weight**
540 - 600 mm	700 - 1,000 mm	460 - 580 mm	500 - 1,500 Kg

SMAW electrodes

Pittarc has developed specific expertise in producing **electrodes for welding low-carbon steel sheets**, providing reliable solutions for various industrial applications.

Thanks to cutting-edge technologies and high-quality raw materials, the company guarantees electrodes with **excellent arc stability and penetration**.

Strict quality control procedures ensure consistent performance and uniformity while minimising defects and rejects during welding.

Our technical team is on hand to assist customers in selecting the most suitable solution to optimise efficiency and results. We serve sectors such as automotive, metalworking, and construction, further consolidating our reputation for dependability and innovation.

Pittarc electrodes are available in **diameters ranging from 2.5 to 4 mm**, supplied in boxes weighing 3.2 or 5.2 kg. For superior preservation, the small box of our electrodes is vacuum-packed, ensuring maximum product quality at all times.

E 7018

Basic coated electrodes for SMAW process, useful for welding soft and fine-grained steels.

Classification	UNI EN ISO 2560 – A: E 42 4 B42 H5 e AWS A5.1: E7018-1

Chemical analysis of all weld metal				
C	**Mn**	**Si**	**P**	**S**
0,12 %	1,00 %	0,50 %	< 0,020 %	< 0,020 %

Mechanical properties of all weld metal	
Yeld strenght (Rp0,2)	> 420 Mpa
Tensile strenght (Rm)	500 - 640 Mpa
Elongation (A5)	26%
Impact energy (ISO-V KV)	47 J @ -40 °C

Approvals	CE Marking - DNV, VdTÜV

Recommended electrical parameters	
Electrode diameter	**Ampere**
2.5 mm	60 - 90 A
3.2 mm	110 - 140 A
4.0 mm	140 - 190 A

Standard packaging			
Electrode dimensions	**Estimated No. of electrodes per single packet**	**Single pack weight**	**Box weight**
2.5 x 300 mm	169	3.2 kg	3.2 kg x 3 = 9.6 kg
3.2 x 450 mm	107	5.2 kg	5.2 kg x 3 = 15.6 kg
4.0 x 450 mm	73	5.2 kg	5.2 kg x 3 = 9.6 kg

SIAT S.P.A. - DIVISIONE PITTARC
Via Cartiera, 3 - 3010 Osoppo (UD) Italy
Tel. +39 0432 062811, Fax +39 0432 062903
pittarcsales@pittini.it, www.pittarc.com