

## 27.0 – WIRE STRAND

All anchorage systems produced by **TTM tension technology s.r.l.** : post-tensioning, slabs and geotechnical applications (rock anchorages) are tested with the three types of wire strands which are present on today's market: **T15**, **T15S** and **T15C**. The use of the **T15C** wire strands, having a diameter of 15.2 mm. and a section of 165 mm<sup>2</sup>, allows to reduce dimensions by applying smaller anchorages, and also to reduce the dimensions of tensioning jacks.

**Strand**, which is supplied thanks to the iron and steel capacity of the group, which has at its disposal two factories for a production of about 150,000 ton per year.

### 27.1 – Bonded wire strand in coils



Wire strand in coils

#### Characteristics of the wire strand

Diameter	Standard	Type of strand	Nominal diameter	Nominal area	$f_{ptk}$	$f_{p(1)k}$	Mass	Tension	Yield	Elastic	Relaxation after	
								1% of elong.	point (Ptk)	limit at 0.1% (Pt0.1k)	1000 h. 0.7 - 0.8 $f_{pt}$	
			mm.	mm <sup>2</sup>	N/mm <sup>2</sup>	N/mm <sup>2</sup>	gr./m	KN	KN	KN	%	%
T15	EN 10138	normal	15.2	140	1860	1670	1093	234	260	230	2.5	4.5
T15S		super	15.7	150	1860	1670	1172	251	279	248	2.5	4.5
T15C	EN 10138	Compact	15.2	165	1860	1670	1289	270	307	264	2.5	4.5

Elastic modulus = 196 +/- 10 KN / mm<sup>2</sup>

### 27.2 – Unbonded wire strand in coils



Wire strand in coils, greased and covered in H.D.P.E.

#### Characteristics of the greased and polyethylene covered strand:

Diameter	Standard	Type of strand	Nominal diameter of strand	Covered nominal diameter	Grease mass	H.D.P.E. mass	Mass	Nom. area
			mm.	mm.	gr./m.	gr./m.	gr./m.	mm <sup>2</sup>
T15	EN 10138	normal	15.2	18.00	40	75	1,210	139
T15S		super	15.7	18.50	40	78	1,290	150
T15C	EN 10138	compact	15.2	18.00	35	70	1,400	165

Elastic modulus = 196 +/- 10 KN / mm<sup>2</sup>