

1. DESCRIPTION.

Weldable steel bars for concrete named B500 according to standards D.M. 17/01/2018 grade B450C, DIN 488 B500B, HRN 1130 B500B, STS-07/060, ELOT 1421 grade B500C, CSN 42 0139 B500B, SS212540, NS 3576-2, NS 3576-3 and EN10080.

2. CHEMICAL COMPOSITION ON HEAT

	Limits	C %	P %	S %	Cu %	N %	Ceq %
PITTINI	max	0.22	0.050	0.050	0.60	0.012	0.50
DIN 488	max	0.22	0.050	0.050	0.60	0.012	0.50
EN10080	max	0.22*	0.050	0.050	0.80	0.012	0.50

* C max 0.25% is permitted, provided that Ceq max is 0.48%

In addition Si_{max}=0.60% and Mn_{max}=1.60% according to NS 3576

3. MECHANICAL AND DIMENSIONAL PROPERTIES

Standard	Steel grade	Diameter range mm	Weight toll. %	Y.P. min MPa	Y.P. max MPa	T.S. min MPa	T.S./Y.S min	T.S./Y.S max	Agt min %
PITTINI	B500	8 ÷ 32	-4/+4.5	500c	563c	550c	1.15c	1.35c	7.5c
DM 17.01.18	B450C	6 ÷ 40	± 4.5±6	450c	563c	540c	1.15c	1.35c	7.5c
DIN 488	B500B	6 ÷ 40	+6/-4c	500c	650c	-	1.08c	-	5c
HRN 1130	B500B	6 ÷ 40	± 4.5	500c	-	-	1.08c	-	5c
CSN 42 0139	B500B	4 ÷ 40	± 4.5±6	500c	-	-	1.08c	-	5c
ELOT 1421	B500C	6 ÷ 40	± 4.5±6	500c	625c	-	1.15c	1.35c	7.5c
SS212540	K500B-T	8 ÷ 32	± 4.5±6	500c	-	-	1.08c	-	5c
SS212540	K500C-T	8 ÷ 32	± 4.5±6	500c	-	-	1.15c	1.35c	7.5c
NS 3576-2	B500NB	8 ÷ 32	± 4.5±6	500c	650c	550c	1.08c	-	5c
NS 3576-3	B500NC	8 ÷ 32	± 4.5±6	500c	650c	NOTE	1.15c	1.35c	NOTE
EN10080	-	6 ÷ 50	± 4.5±6	-	-	-	-	-	-

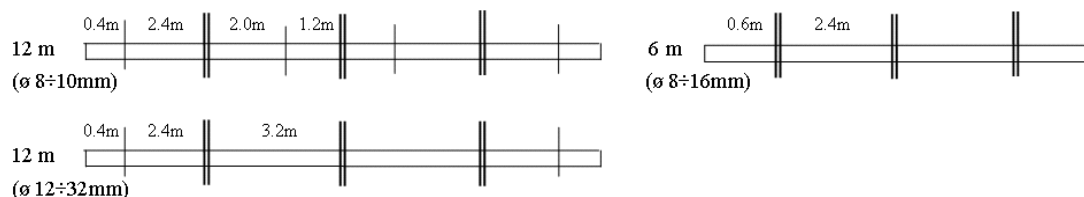
NOTES:

- c - characteristic values. m – average values
- D.M. rebending test: D mandrel = k*d; bend α=90° and bend back 20° after ageing 100°C/30', k=4 for d≤10mm, k=5 for d=12÷16mm, k=8 for d=18÷25mm, k=10 for d≥26mm.
- CSN rebend test: D mandrel=k*d; α=90°; ageing to 100°C/1h (to 250°C/30min); k=5 for d≤16mm; k=8 for 16mm<d≤25mm; k=10 for d>25mm.
- ELOT and CSN bend test: bend α=180°; for d≤16mm k=3, for d=18÷40mm k=6.
- DIN rebending test: D mandrel =k*d; α=90°; ageing to 100°C/1h; β=20°; k=5 for 6<d≤12mm; k=6 for 14<d≤16mm; k=8 for 20<d≤28mm.
- EN10080 rebending test: bend α=90° and bend back β=20° after ageing 100°C/1h; for d≤16mm k=5, for d=18÷25mm k=8, for d≥26mm k=10. Bending test α=180°, for d≤16mm k=3, for d>16mm k=6.
- NS 3576-3: T.S.≥600MPa; Agt_{min}=7.5% for diameters up to 14mm, Agt_{min}=8.0% for diameters from 16mm up to 40mm.

4. STANDARD PACKAGING.

In bundles with standard length 6m and 12m (14m on demand); tied with wire rod diam. 7 mm. Tolerance length 0/+100mm. Maximum 3 short bars in a bundle with minimum length 6 m.

Bundle weight for 6m max 1.7 t. Bundle weight for 12m: about 1.7 t for diameter 8mm; about 2.2 t for diameter 10mm; about 2.5 t for diameters from 12 mm to 32 mm.



5. STANDARD IDENTIFICATION.

Each bundle with label type HD reporting:

FERRIERE NORD S.p.A.
I - 33010 OSOPPO (UD) ITALIA
BARS PITTINI B500
Logo Ü + Zag + C + Csk

Reference Standards

HEAT N°
DIAMETER mm
LENGTH m

Additional label for deliveries in Croatia, Norway and Sweden.

6. STANDARD CERTIFICATION.

According EN 10204 on demand.

Declaration of Conformity on demand where applicable.

7. APPROVALS

Servizio Tecnico Centrale Ministero Infrastrutture e Trasporti (Italy); MPA NRW (Germany), IGH (Croatia) , ZAG (Slovenia), SIMPTST (Poland), ICECON (Romania), TSUS (Slovakia), TZUS (Czech rep.), EME (Hungary), Globecert (Norway and Sweden).

8. IDENTIFICATION MARK .

Mark 4-7

