

IGNITION SYSTEM

MANUAL AE01 EN	<p>HIGH ENERGY IGNITION ROD</p> <p>E21-E21A-E21AB</p>
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03	20/11/2010	UT		VEN	
02	25/09/2009	UT		VEN	
01	30/10/2003	UT		VEN	
REV.	DATA	FUNZ.	FIRMA	FUNZ.	FIRMA
			PREPARATO	VERIFICATO/APPROVATO	

TESI srl
Sede Operativa

IGNITION SYSTEM

1.0 GENERALITY

SAFE AREA VERSION

Standard **E21** igniter threaded 13/16"UNEF for cables DN8 series CV5-7-8.

SAFE AREA VERSION (for double core cables)

E21A igniter threaded 7/8"GAS for cables DN12 series CEA-44.

EXPLOSION PROOF VERSION - ATEX (with junction box)

E21AB for armoured cables 560/CAR2 or DN12 series CEA174-CEA174/4F cable.

TESI's high energy igniters are available in standard version with 14/17mm diameter, stainless steel AISI 304 (1.4301) tube and connecting thread 1/2". On request it can be supplied with 12mm diameter (welded firing end), with tubes of others materials (1.4845 AISI 310 – 1.4404 AISI 316L) or connecting threads 3/4" and 1".

The igniter assembly of the machine (burner, gas turbine, etc...) in potentially explosive atmospheres is done through the use of a igniter nipple spar ATEX certificate of our exclusive design. The connection boxes may have the entrance straight or angled (90 degree) and are classified II2G(D) Ex d IIC T5 IP66 in according to 94/9/CE rules (ATEX).

All 14/17mm diameter igniters have the replaceable tip as it is consumable part and will last (depending on model) of 100000÷150000 discharges varies according to the power of the feeder and conditions of use. See on the following table to select the most suitable firing end to the required use

2.0 SUITABLE FIRING END

HE IGNITION FIRING END FOR RODS								
MODEL	CODE	DIAMETRE mm	TEMPERATURE °C (PEEK)	USE OUTDOOR	WATERPROOF	FUEL GAS	FUEL OIL	HEAVY OIL
HEM 17	ZZA00100	17 (FINALE 12)	760 (1000)	YES	YES	YES	YES	YES
HERC 17	ZZA00106	17	760 (1000)	YES	YES	YES	YES	YES
HEM 14	ZZA00130	14 (FINALE 12)	760 (1000)	YES	YES	YES	YES	YES
HEM 12	ZZA00160	12	760 (1000)	YES	YES	YES	YES	YES
HERC 12	ZZA00161	12	760 (1000)	YES	YES	YES	YES	YES

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IGNITION SYSTEM**3.0 MAINTENANCE AND TRIALS FOR THE IGNITER**

High energy technology is based on semiconductors properties; this to allow installation in hard conditions, to ignite low flammable fuels or where the humidity or dirty and oxidation normally damage the conventional high tension spark plug.

High energy no need maintenance, no need to be fluxed with cooling air or gas, never try to clean with brush or other tools the top of the tip.

You cannot measure the resistance and the insulation of the tip with a tester or a meger as the resistance of the pad will change every spark and can vary from a few tens of Ohm to 1 MOhm values.

It is also dangerous to use an high voltage (Vdc) meger as a possible discharge on the pad surface may permanently damage the tip.

It will therefore be necessary to always have a new tip as spare part to verify the operation of the igniter in case of doubt or system problems.

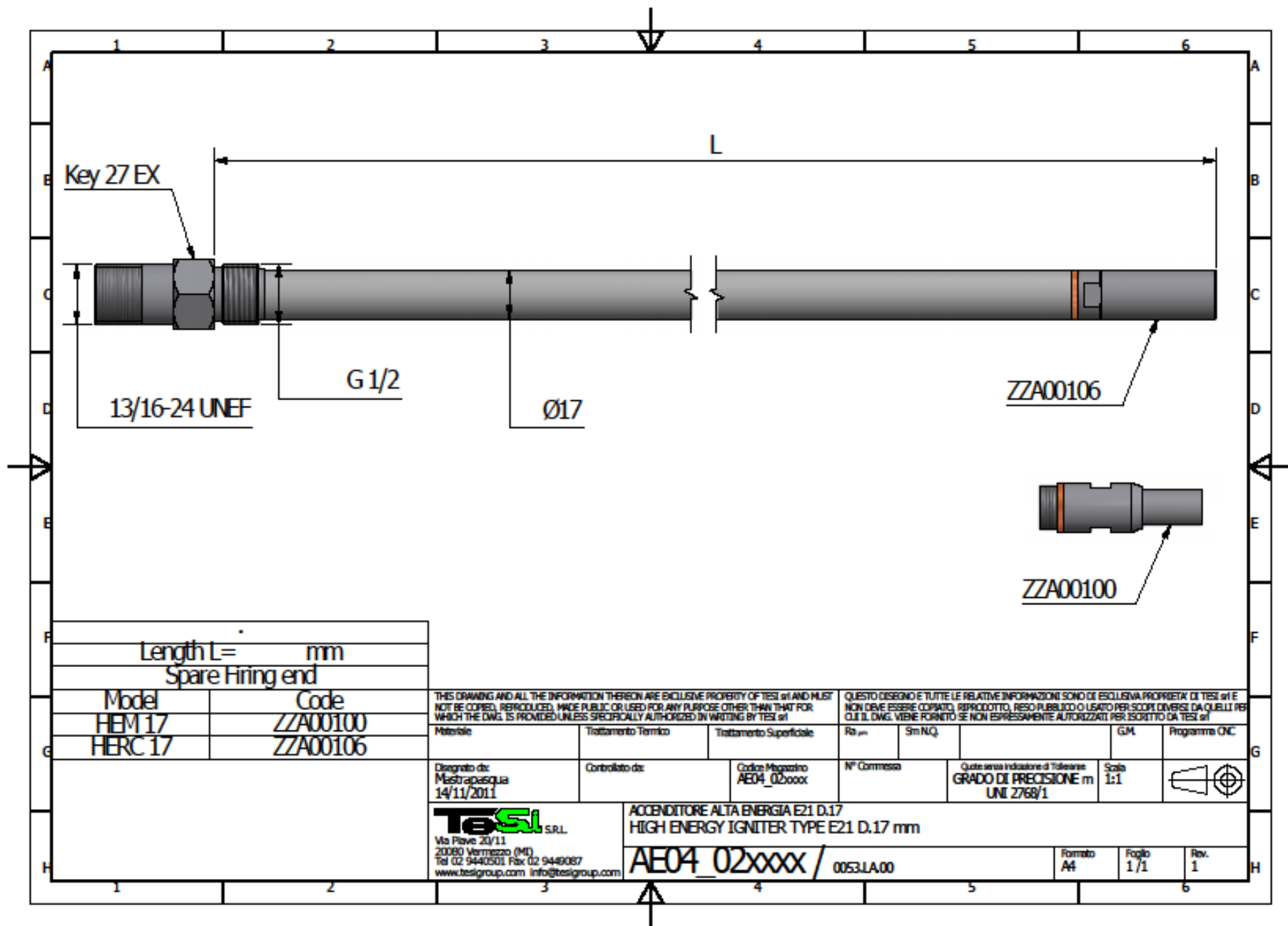
Remove the tip with a 15mm spanner and when refitting the new one, pay close attention to the insertion of the electrode of the igniter in the shank of the tip as a wrong positioning would cause an internal short-circuit.

Without the tip mounted on the igniter, you can instead measure the isolation between the center electrode and the tube (ground).

If the insulation is not optimum, remove the tube by unscrewing it and check on the ceramics there is the presence of water due to condensation. In that case, clean the inside of the tube and the ceramics with solvent and dry with hot air before you reassemble everything, otherwise check if the ceramics are chipped and/or have blackened trace of surface discharges, in which case you will need to replace all the igniter.

4.0 LAYOUT

- DRAWING AE04_02xxxx
- DRAWING AE05_02xxxx
- DRAWING AE07_00xxxx
- DRAWING AE08_02xxxx



Key 27 EX

13/16-24 UNEF

G1/2

Ø17

ZZA00106

ZZA00100

Length L= mm
Spare firing end

Model	Code
HEM 17	ZZA00100
HERC 17	ZZA00106

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Materiale	Tattamento Termico	Tattamento Superficiale	Ra µm	Sm NIQ	GM	Programma CNC

Disegnato da:
Mastropasqua
14/11/2011

Controllato da:

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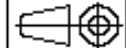
ACCENDITORE ALTA ENERGIA E21 D.17
HIGH ENERGY IGNITER TYPE E21 D.17 mm

AE04_02xxxx / 0053LA.00

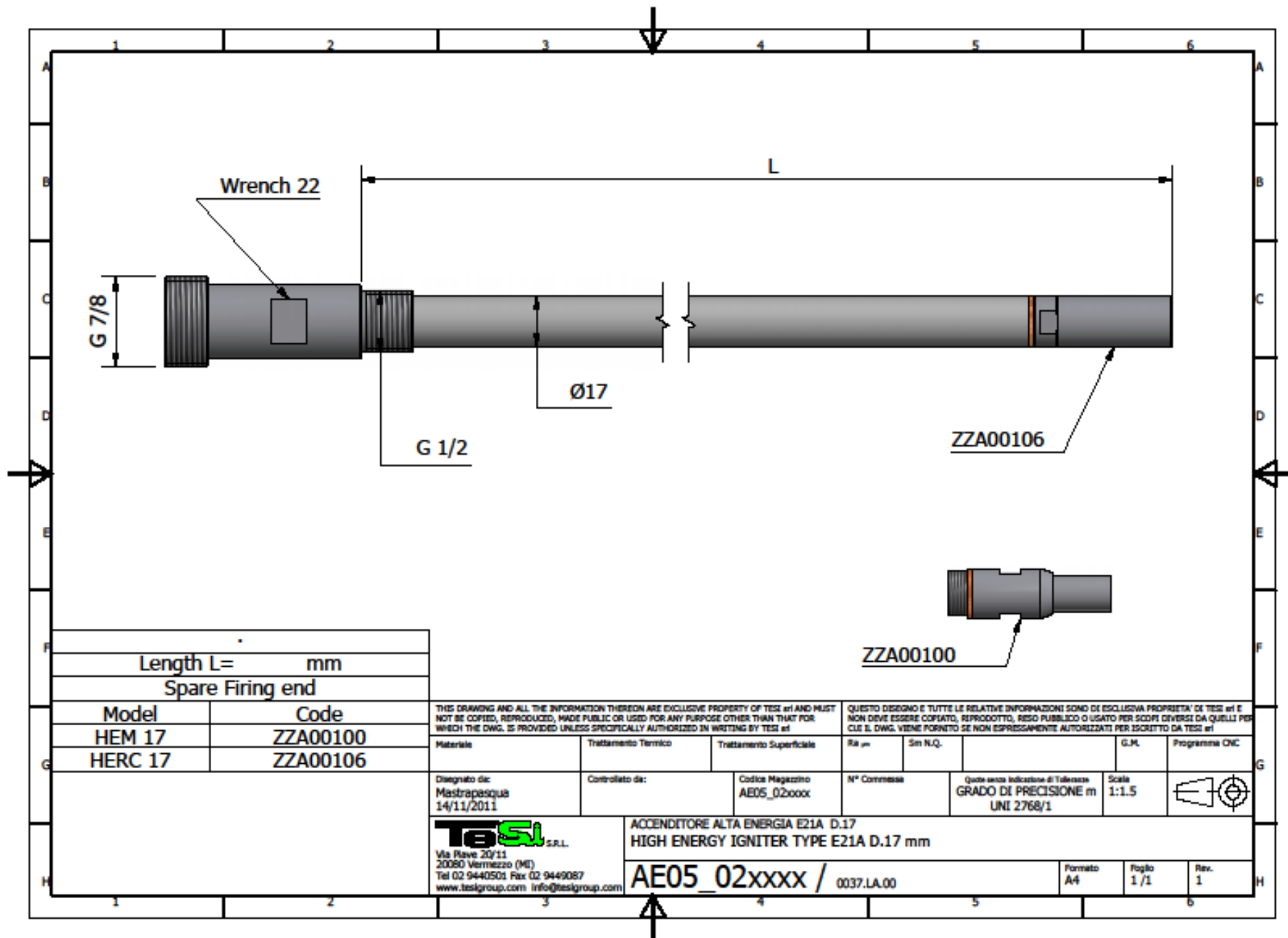
N° Commessa

Quote senza Indicazione di Tolleranze
GRADO DI PRECISIONE m
UNI 2768/1

Scala
1:1



Formato	Foglio	Rev.
A4	1/1	1



Length L= mm
Spare Firing end

Model	Code
HEM 17	ZZA00100
HERC 17	ZZA00106

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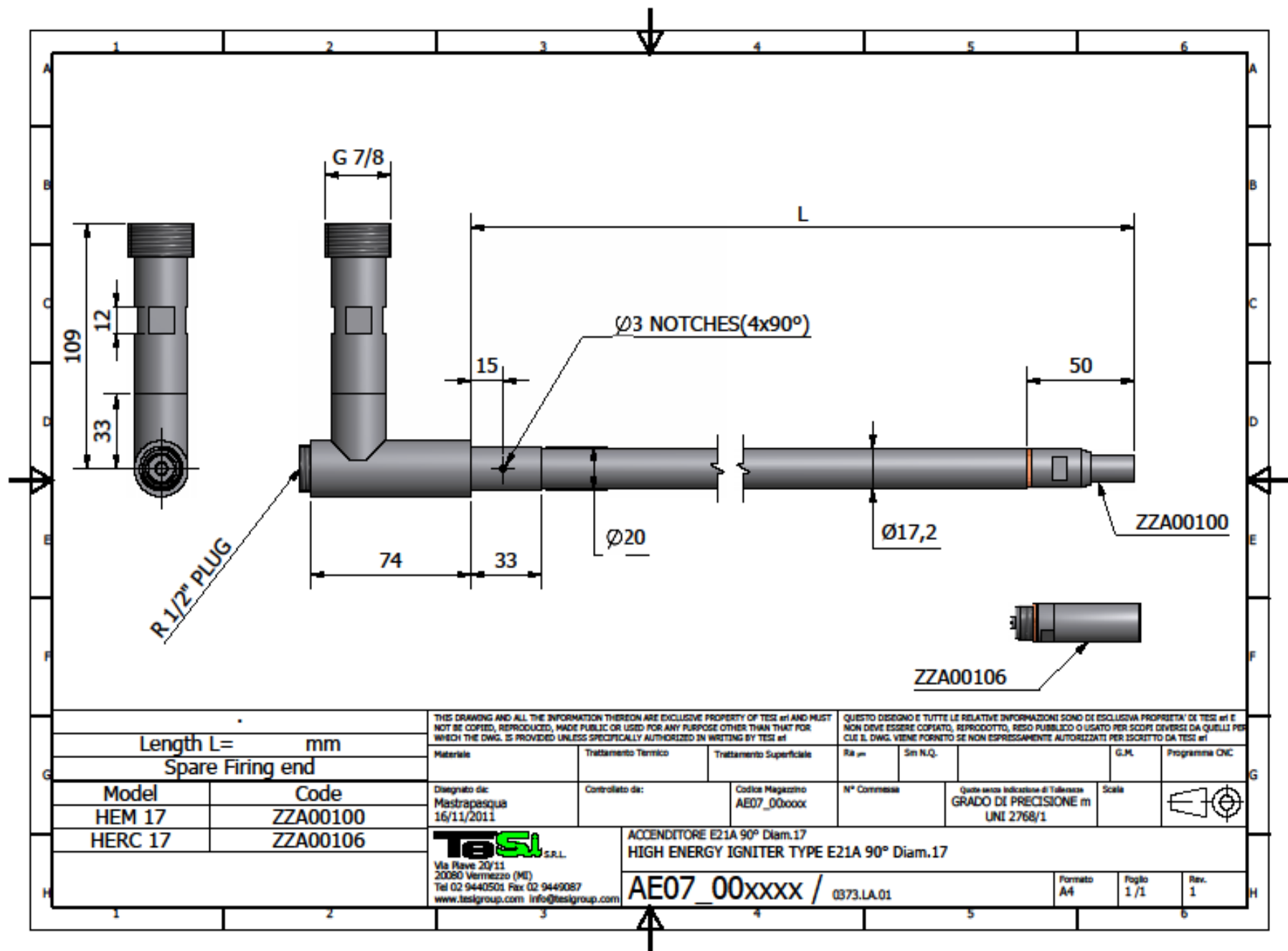
Materiale	Trattamento Termico	Trattamento Superficiale	Ra µm	Sm N.Q.	G.M.	Programma CNC
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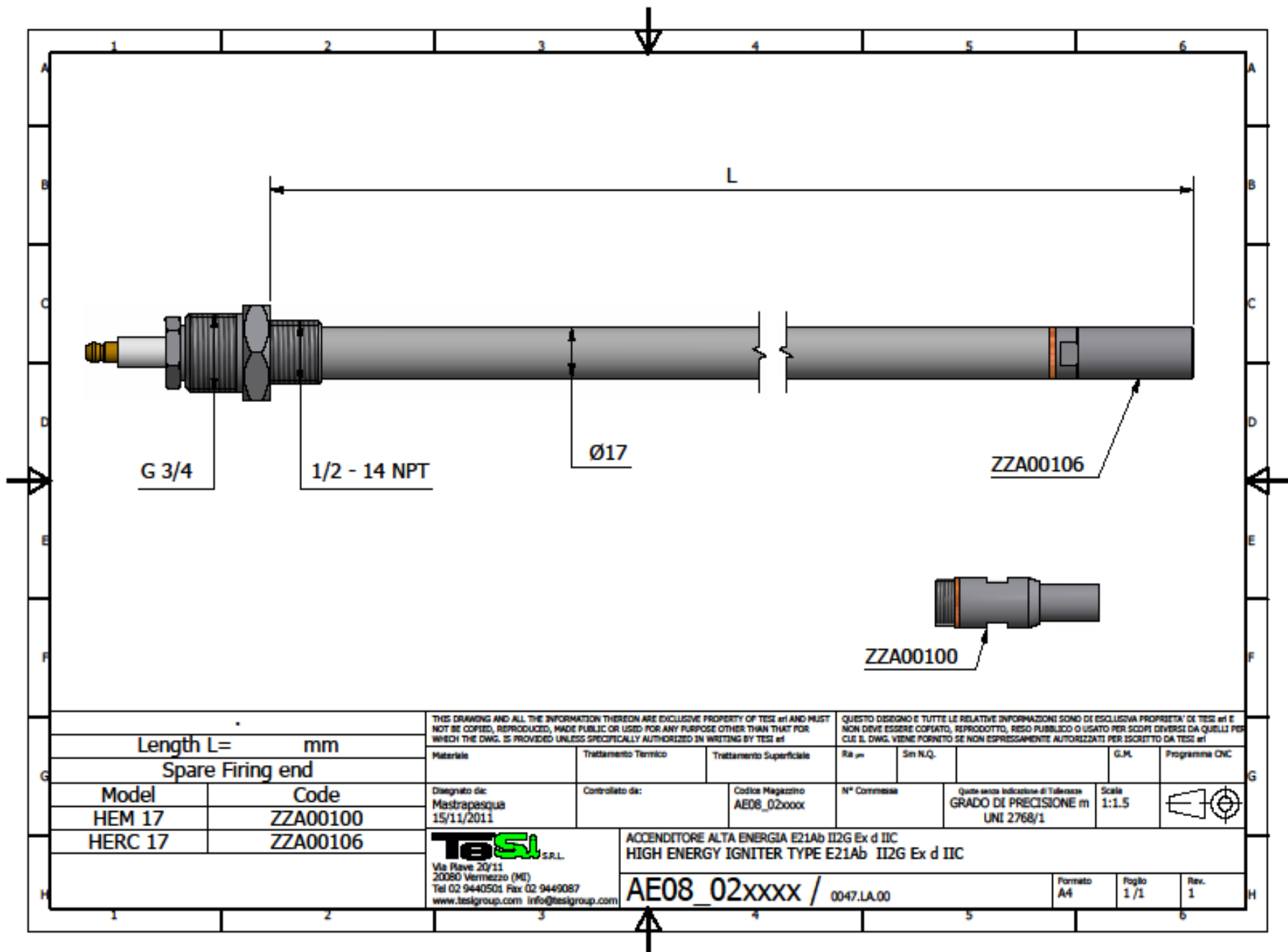
Disegnato da: Mastrapesqua 14/11/2011	Controllato da:	Codice Magazzino AE05_02xxxx	N° Commessa	Quota senza Indicazione di Tolleranze GRADO DI PRECISIONE m UNI 2768/1	Scala 1:1.5	
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ACCENDITORE ALTA ENERGIA E21A D.17
HIGH ENERGY IGNITER TYPE E21A D.17 mm

AE05_02xxxx / 0037.LA.00	Formato A4	Foglio 1 / 1	Rev. 1
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Length L= mm	
Spare Firing end	
Model	Code
HEM 17	ZZA00100
HERC 17	ZZA00106

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Materiale Trattamento Termico Trattamento Superficiale

Disegnato da: Mastropesquis 15/11/2011 Controllato da:

Codice Magazzino AE08_02xxxx

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Ra µm Sm N.Q. G.M. Programma CNC

N° Commessa Quote senza indicazione di Tolleranze Scale 1:1.5

GRADO DI PRECISIONE m UNI 2768/1

ACCENDITORE ALTA ENERGIA E21Ab II2G Ex d IIC
 HIGH ENERGY IGNITER TYPE E21Ab II2G Ex d IIC

AE08_02xxxx / 0047.LA.00 Formato A4 Foglio 1/1 Rev. 1