



GRAND-DUCHÉ DE LUXEMBOURG

Ministère du Développement durable
et des Infrastructures
Département des Transports

L-2938 Luxembourg

SOCIÉTÉ NATIONALE DE
CERTIFICATION ET D'HOMOLOGATION

s.à r.l.

Registre de Commerce: B 27180

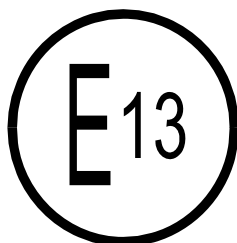
L-5201 Sandweiler



Référence: E13*110R00*110R00*0224*00

Annexes: - Rapport technique
- Fiche de renseignements du constructeur

Sandweiler, le 18 octobre 2011



Communication concernant: - la délivrance d'une homologation

Communication concerning:

approval granted

- ~~l'extension d'homologation~~

approval extended

- ~~le refus d'homologation~~

approval refused

- ~~le retrait d'homologation~~

approval withdrawn

- ~~l'arrêt définitif de la production~~

production definitely discontinued

d'un type d'organe GNC en application du Règlement N° 110

of a type of CNG component pursuant to Regulation N° 110

Homologation N°:

Approval number:

E13*110R00*110R00*0224*00

Marque d'homologation:

Approval mark:



110R-000224

1.

Organe GNC ⁽²⁾:

CNG component considered ⁽²⁾:

Réservoir(s) ou bouteille(s):

Container(s) or cylinder(s):

not applicable

Témoin de pression:

Pressure indicator:

Type: MGN5

Soupape de surpression:

Pressure relief valve:

not applicable

Vanne(s) automatique(s):

Automatic valve(s):

not applicable

Limiteur de débit:

Excess flow valve:

not applicable

Capot étanche:

Gas-tight housing:

not applicable

	Détendeur(s) de pression: Pressure regulator(s):	not applicable
	Soupape(s) de contrôle: Check valve(s):	not applicable
	Dispositif de surpression (à déclenchement thermique): Pressure relief device (PRD) (temperature triggered):	not applicable
	Vanne manuelle: Manual valve:	not applicable
	Flexibles: Flexible fuel lines:	not applicable
	Embout ou réceptacle de remplissage: Filling or receptacle:	not applicable
	Mélangeur gaz / air (injecteur(s)): Gas / air mixer (injector(s)):	not applicable
	Régulateur de débit: Gas flow adjuster:	not applicable
	Mélangeur gaz / air (carburateur): Gas / air mixer (carburettor):	not applicable
	Module de commande électronique: Electronic control unit:	not applicable
	Capteur(s) de pression et de température: Pressure and temperature sensor(s):	Type: MGN5
	Filtre(s) à GNC: CNG filter(s):	not applicable
	Dispositif de surpression (à déclenchement manométrique): Pressure relief device (PRD) (pressure triggered):	not applicable
2.	Marque de fabrique ou de commerce: Trade name or mark:	TA, FSS, BRC, MTM, IMPCO, Kit MTM, Zavoli, GFI
3.	Nom et adresse du constructeur: Manufacturer's name and address:	TA Gas Technology S.A. José Ingenieros 2250 1643 Buenos Aires - Argentina
4.	Le cas échéant, nom et adresse du représentant du constructeur: If applicable, name and address of manufacturer's representative:	not applicable
5.	Présenté à l'homologation le: Submitted for approval on:	04.07. – 26.08.2011
6.	Autorité déléguée: Assigned authority:	<i>Société Nationale de Certification et d'Homologation L-5201 Sandweiler</i>
	Service technique chargé des essais d'homologation: Technical service responsible for type-approval tests:	Luxcontrol SA B.P. 349 L-4004 Esch-sur-Alzette
7.	Date du procès-verbal délivré par ce service: Date of test report issued by that service:	12.10.2011

8. **Numéro du procès-verbal:**
Number of test report: LCA 54 0874 002 11
9. **L'homologation est:**
Approval is: granted
10. **Raison(s) de l'extension (le cas échéant):**
Reason(s) of extension (if applicable): not applicable
11. **Lieu:**
Place: Sandweiler
12. **Date:**
Date: 18 octobre 2011
13. **Signature:**
Signature:

Pour le Département des Transports



[Signature of Marco FELTES]

Marco FELTES
Inspecteur Principal

Pour la SNCH



[Signature of Claude LIESCH]

Claude LIESCH
Directeur



14. **Des copies des documents soumis dans le dossier d'homologation ou d'extension d'homologation peuvent être obtenues sur demande:**
The documents filed with the application or extension of approval can be obtained upon request:

see: INDEX to TYPE-APPROVAL REPORT

ADDITIF
ADDENDUM

1.	Renseignements complémentaires concernant l'homologation d'un type d'organe GNC en application du Règlement N° 110 ⁽¹⁾: Additional information concerning the type-approval of a type of CNG components pursuant to regulation N° 110 ⁽¹⁾ :	
1.1.	Réservoir(s) ou bouteille(s): Container(s) or cylinder(s):	not applicable
1.1.1.	Dimensions: Dimensions:	not applicable
1.1.2.	Matériau: Material:	not applicable
1.2.	Témoin de pression: Pressure indicator:	
1.2.1.	Pression(s) de fonctionnement: Working pressure(s):	max. 260 bar
1.2.2.	Matériau: Material:	see: Information folder
1.3.	Soupape de surpression (soupape de décompression): Pressure relief valve (discharge valve):	not applicable
1.3.1.	Pression(s) de fonctionnement: Working pressure(s):	not applicable
1.3.2.	Matériau: Material:	not applicable
1.4.	Vanne(s) automatique(s): Automatic valve(s):	not applicable
1.4.1.	Pression(s) de fonctionnement: Working pressure(s):	not applicable
1.4.2.	Matériau: Material:	not applicable
1.5.	Limiteur de débit: Excess flow valve:	not applicable
1.5.1.	Pression(s) de fonctionnement: Working pressure(s):	not applicable
1.5.2.	Matériau: Material:	not applicable
1.6.	Capot étanche: Gas-tight housing:	not applicable
1.6.1.	Pression(s) de fonctionnement: Working pressure(s):	not applicable
1.6.2.	Matériau: Material:	not applicable
1.7.	Régulateur(s) de pression: Pressure regulator(s):	not applicable
1.7.1.	Pression(s) de fonctionnement: Working pressure(s):	not applicable
1.7.2.	Matériau: Material:	not applicable
1.8.	Soupape(s) de contrôle ou de antiretour: Check valve(s) or non-return valve(s):	not applicable
1.8.1.	Pression(s) de fonctionnement: Working pressure(s):	not applicable
1.8.2.	Matériau: Material:	not applicable

1.9.	Dispositif de surpression (à déclenchement thermique): Pressure relief device (temperature triggered):	not applicable
1.9.1.	Pression(s) de fonctionnement: Working pressure(s):	not applicable
1.9.2.	Matériau: Material:	not applicable
1.10.	Vanne manuelle: Manual valve:	not applicable
1.10.1.	Pression(s) de fonctionnement: Working pressure(s):	not applicable
1.10.2.	Matériau: Material:	not applicable
1.11.	Flexibles: Flexible fuel lines:	not applicable
1.11.1.	Pression(s) de fonctionnement: Working pressure(s):	not applicable
1.11.2.	Matériau: Material:	not applicable
1.12.	Embout ou réceptacle de remplissage: Filling unit or receptacle:	not applicable
1.12.1.	Pression(s) de fonctionnement: Working pressure(s):	not applicable
1.12.2.	Matériau: Material:	not applicable
1.13.	Injecteur(s): Gas injector(s):	not applicable
1.13.1.	Pression(s) de fonctionnement: Working pressure(s):	not applicable
1.13.2.	Matériau: Material:	not applicable
1.14.	Régulateur de débit: Gas flow adjuster:	not applicable
1.14.1.	Pression(s) de fonctionnement: Working pressure(s):	not applicable
1.14.2.	Matériau: Material:	not applicable
1.15.	Mélangeur gaz / air: Gas / air mixer:	not applicable
1.15.1.	Pression(s) de fonctionnement: Working pressure(s):	not applicable
1.15.2.	Matériau: Material:	not applicable
1.16.	Module de commande électronique (pour l'alimentation au GNC): Electronic control unit (CNG-fuelling):	not applicable
1.16.1.	Principes de base du logiciel: Basic software principles:	not applicable
1.17.	Capteur(s) de pression et de température: Pressure and temperature sensor(s):	
1.17.1.	Pression(s) de fonctionnement: Working pressure(s):	max. 260 bar
1.17.2.	Matériau: Material:	see: Information folder

1.18.	Filtre(s) à GNC: CNG filter(s):	not applicable
1.18.1.	Pression(s) de fonctionnement: Working pressure(s):	not applicable
1.18.2.	Matériau: Material:	not applicable
1.19.	Dispositif de surpression (à déclenchement manométrique): Pressure relief device (pressure triggered):	not applicable
1.19.1.	Pression(s) de fonctionnement: Working pressure(s):	not applicable
1.19.2.	Matériau: Material:	not applicable

⁽¹⁾ **Indiquer les tolérances.**

Indicate the tolerances.

⁽²⁾ **Biffer la mention inutile.**

Strike out what does not apply.



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L-5201 Sandweiler



Référence: E13*110R00*110R00*0224*00

Annexes: - Rapport technique
- Fiche de renseignements du constructeur

Sandweiler, le 18 octobre 2011

INDEX DU DOSSIER D'HOMOLOGATION INDEX TO TYPE-APPROVAL REPORT

Numéro d'homologation:

Approval number:

E13*110R00*110R00*0224*00

Révision:

Revision:

00

Marque de fabrique ou de commerce:

Trade name or mark:

TA, FSS, BRC, MTM, IMPCO, Kit MTM, Zavoli, GFI

Type:

Type:

MGN5

1. Procès-verbal d'essai:

Test report:

N° LCA 54 0874 002 11

- Technical report:

Page(s) 1 to 6;

- Index:

Annex A - Page(s) 1.

2. Dossier du constructeur:

Report of the manufacturer:

N° 0874 002 11

- Manufacturer's information document:

Page(s) 1 to 26.

3. Autres documents annexés:

Other documents annexed:

not applicable

4. Date de délivrance de l'homologation initiale:

Date of issue of initial type approval:

18.10.2011

5. Date de la dernière délivrance de pages révisées:

Date of last issue of revised pages:

not applicable

6. Date de la dernière délivrance d'une homologation révisée:

Date of last extension:

not applicable

TECHNICAL REPORT

No.: LCA 54 0874 002 11

Inspection concerning the

Specific components of motor vehicles using compressed natural gas (CNG) in their propulsion system

performed according to

ECE – Regulation No. 110

Type: **MGN5**
Manufacturer: **TA Gas Technology S.A.**
José Ingenieros 2250
Beccar , San Isidro
1643 Buenos Aires - Argentina

Extension -- to ECE Type Approval no.: not applicable

Index:

1. General	Page 2
2. Inspections and their results	Page 3
3. Evaluation of test results	Page 5
4. Statement of compliance	Page 6
5. Annex (beginning with an index)	

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1. **General**

1.1. **Test Provisions**

The inspection was carried out according to the requirements of ECE-Regulation No. 110 including Supplement 9 to the 00 series of amendments, which entered into force on August 19, 2010.

1.2. **Information concerning the vehicle type and the requested approval**

The statements below apply to the previous ECE type-approval as referred to on page 1.

1.2.1. [] Numbering according to the communication concerning the approval of ECE-R110

[1.] CNG component considered:

Pressure gauge indicator and pressure sensor
- **Type: MGN5**

[2.] Trade name or mark:

TA, FSS, BRC, MTM, IMPCO, Kit MTM, Zavoli, GFI

[3.] Manufacturer's name and address:

TA Gas Technology S.A.
José Ingenieros 2250
Beccar , San Isidro1643 Buenos Aires - Argentina

[4.] If applicable, name and address of manufacturer's representative:

Not applicable

[5.] Submitted for approval on: **4.07.2011 - 26.08.2011**

[10.] Reason(s) of extension:

not applicable

1.2.2. [] Numbering according to the communication concerning the approval of ECE-R110, Annex 2B –Addendum

[1.] Additional information concerning the type approval of a type of CNG components pursuant to Regulation No 110:

[1.1.] **not applicable**

...



- [1.2.] Pressure indicator
- [1.2.1.] Working pressure(s): **max. 260 bar**
- [1.2.2.] Material:
- gauge connector, bourdon, rack: **brass**
 - pressure gauge/sensor pointer: **PA6.6 GF23**
 - others: **see information document**
- [1.3]-[1.16.] **not applicable**
- [1.17.] Pressure sensor
- [1.17.1.] Working pressure(s): **max. 260 bar**
- [1.17.2.] Material:
- Led's support: **PA6**
 - pressure gauge/sensor pointer: **PA6.6 GF23**
 - others: **see information document**
- [1.18]-[1.19.] **not applicable**

2. **Inspections and their results**

2.1. **Version of the tested equipment**

The following variants have been used for testing (if not stated in part 1.2.1. of this report):

not applicable

2.2. **Inspection items**

	Inspectors	Location of test:	Date of receipt of test item:	Date of test:
Main	D. Durazzi	See item [3.]	4.07.2011	4.7.11 – 26.8.11

2.2.1. **General**

The marking requirements according to item 4.1. and 4.2. of Part I of the Regulation are fulfilled.

Every material of the equipment in contact with CNG is compatible with it.

The fitting of the CNG-component, approved by this regulation into a full installation of CNG-equipment, complies with relevant electromagnetic compatibility requirements according to Regulation R10.02 or equivalent.

The pressure indicator has parts of class 0.

...



2.2.2. Inspections: (according to Annex 4E; Class 0 device)

Tests	Test results	Line item
Overpressure test	no rupture or permanent distortion at pressure test of 1,5 times the maximum working pressure maintained for a period of 180 seconds	Annex 5A
External leakage test	Leakage from stem or body seals or other joints less than 15 cm ³ / hour under a pressure of 1.5 times the maximum working pressure at room temperature, at - 40°C and at + 120°C.	Annex 5B
High temperature test	Leakage from stem or body seals or other joints less than 15 cm ³ / hour under the maximum working pressure at temperature + 120°C, after 8 hours conditioning	Annex 5B
Low temperature test	Leakage from stem or body seals or other joints less than 15 cm ³ / hour under the maximum working pressure at temperature - 40°C, after 8 hours conditioning	Annex 5B
Internal leakage test	not applicable	Annex 5C
Durability test	not applicable	Annex 5L
CNG compatibility	not applicable	Annex 5D
Corrosion resistance	requirements fulfilled	Annex 5E
Resistance to dry heat	not applicable	Annex 5F
Ozone ageing	not applicable	Annex 5G
Temperature cycle	not applicable	Annex 5H
Vibration resistance	not applicable	Annex 5N
Operating temperatures	components designed to operate at temperatures between -40°C and +120°C	Annex 5O
General provisions	requirements fulfilled	Par. 6.1
Provision regarding the approval of pressure sensors	requirements fulfilled	Annex 4E

...



2.3. Remarks

Inspection results are only applicable to items, which have been tested.

2.4. Test facilities

Calibration of measuring and test equipment used to carry out the inspections is in accordance with the EEC-Directive and/or ECE-Regulation stated in 1.1. of this report and with ISO 17025.

Inspectors stated under 2.2. of this report were in charge of performing and/or evaluating the tests.

3. Evaluation of test results

3.1. Variants and equipment covered

The tests carried out cover the following variations as far as these are relevant for the gas unit:

- not applicable

3.2. Remarks

3.2.1. Main report:

not applicable



4. **Statement of compliance**

The inspections items and measurements carried out have shown the compliance of the vehicle type described in this report and the attached Annex with the requirements of ECE-Regulation No. 110 including Supplement 9 to the 00 series of amendments, which entered into force on August 19, 2010.

Esch/Alzette, 12 October 2011

Luxcontrol s.a.
Service Homologation-automobile

David Durazzi
Ingénieur-Inspecteur

Mauro Moscardelli
Ingénieur-Inspecteur

Annex



1. Introduction

This pressure gauge provides a visual indication of the pressure in the CNG line. The movement of a Bourdon tube is transmitted to a needle or pointer that indicates the pressure on a scale.

The pressure gauge has an electronic transducer attached to its front window that converts the pointer position into different voltage levels. This voltage is conducted to the vehicle cabin and connected to a fuel selector switch, to provide an indication of the CNG level in the fuel tank.

2. Operating principles

The model MGN5 pressure gauge features a Bourbon tube system.

Its operating principle is based on the deflection of the free end of the Bourdon tube, as a result of the internal gas pressure. The deflection is proportional to the gas pressure and is then transmitted to a kinematic chain of pieces that convert such displacement into a rotation of the pointer on a scale or indicator panel with a 400 bar full scale value.

An infrared sensor connected to the casing of the pressure gauge converts the indicated pressure into an electric signal that is used by the fuel selector switch located inside the vehicle cabin to indicate the fuel level and for switching the type of fuel in case of low gas pressure.



3. Data sheet

Fluid to convey	CNG
Type of pressure gauge	<i>Bourdon type pressure gauge with sensor</i>
Class	2.5
Inlet connection	<i>1/4" thread BSP</i>
Pressure indicator	<i>Pointer on a 0 - 400 bar scale</i>
Sensor	<i>Infrared</i>
Working pressure	260 bar
Burst pressure	> 800 bar
Operating temperature	-40 to 120 °C
Inlet protection	IP54
Connector	<i>P1 Tyco Super Seal PIN 282105-1</i>
Corrosion resistance	<i>144 h of salt spray according to ASTM B117</i>

4. Materials

No.	Description	Material
1	Pressure gauge cover	Polycarbonate
2	Plate fastening screw	SAE 1010
3	Led's support	PA-6
4	Cable bushing	Flexible rubber
5	Pressure gauge pointer	PA-6.6 GF23
6	Outer casing	SAE 1010
7	Connecting cable	PVC + Copper
8	Connecting plug	PA-6.6 GF
9	Terminals	Copper + Zinc
10	Connector seal	Silicone rubber
11	Connector	Brass
12	Bourdon	Brass
13	Weld 1.5 ISO 9453 S- Sn96Ag4 - F-SW 24-2.0% DIN 9511	
14	Rod	
15	Rack	Brass
16	Screws	Steel 8.8
17	Panel	Aluminum



5. Marking



6. Brand

Trademarks:

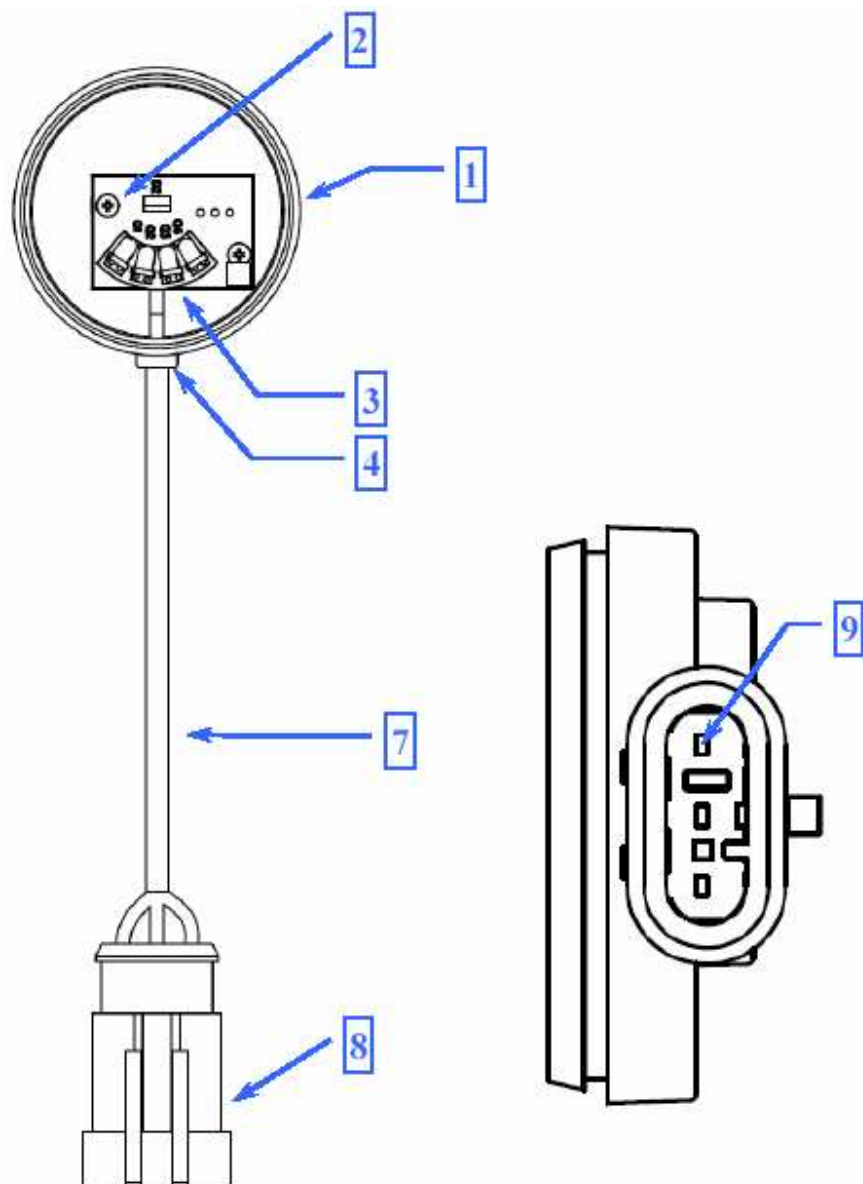
- TA
- FSS
- BRC
- MTM
- IMPCO
- Kit MTM
- Zavoli
- GFI

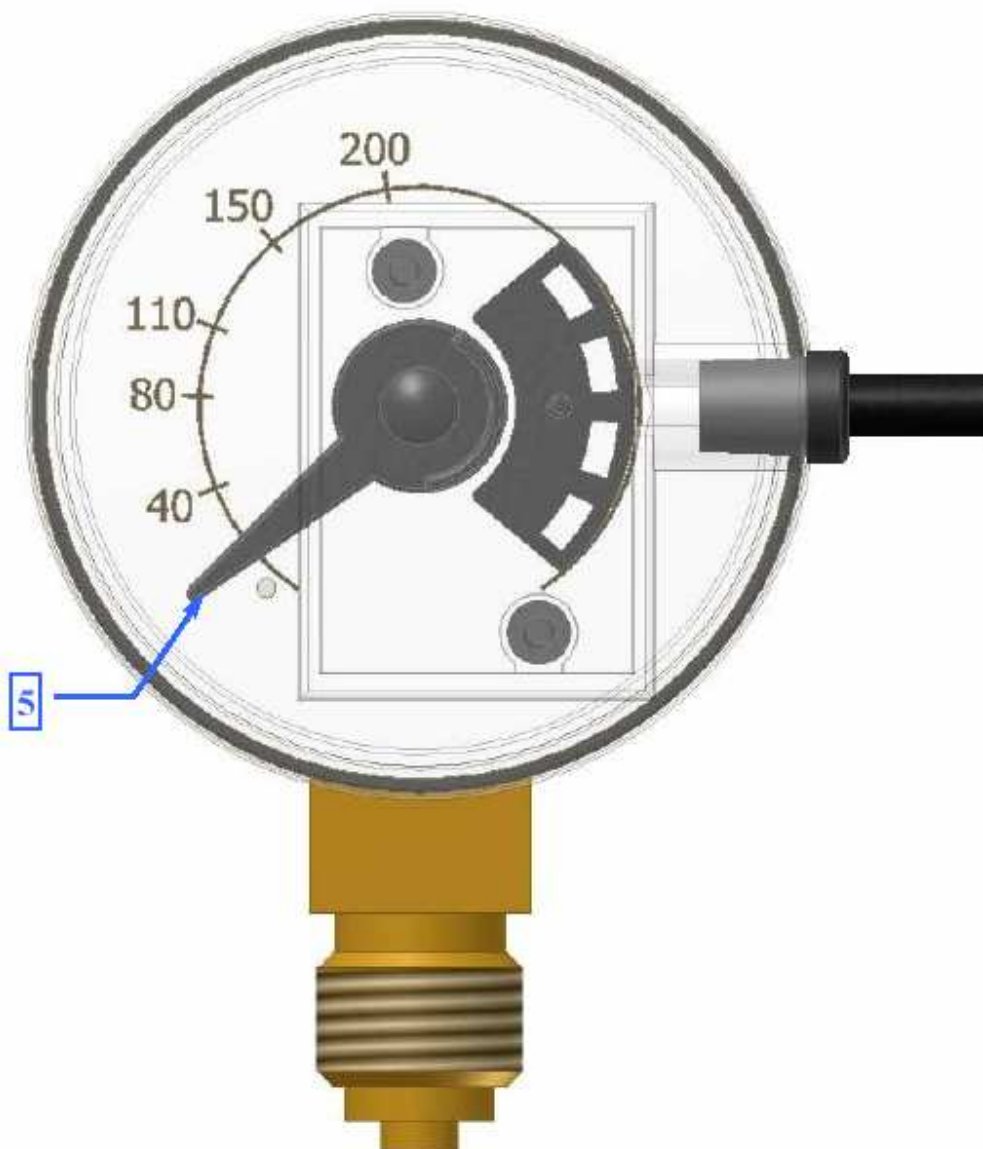
Administración y Planta Industrial
José Ingenieros 2250 B1643FQT Beccar, San Isidro,
Provincia de Buenos Aires, Argentina. Tel./ Fax: (54 11) 4892-1200

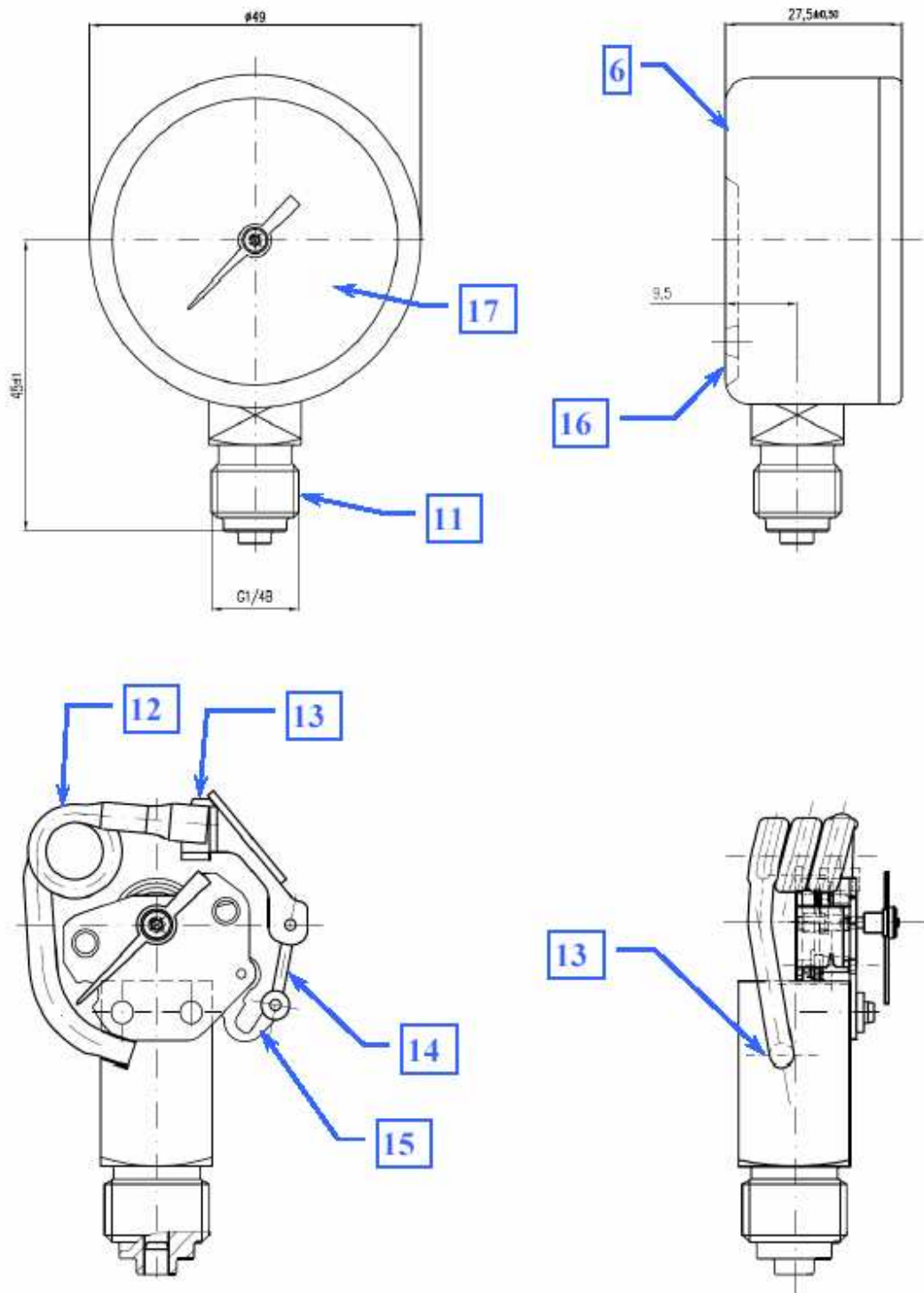
www.ta.com.ar



7. Drawings







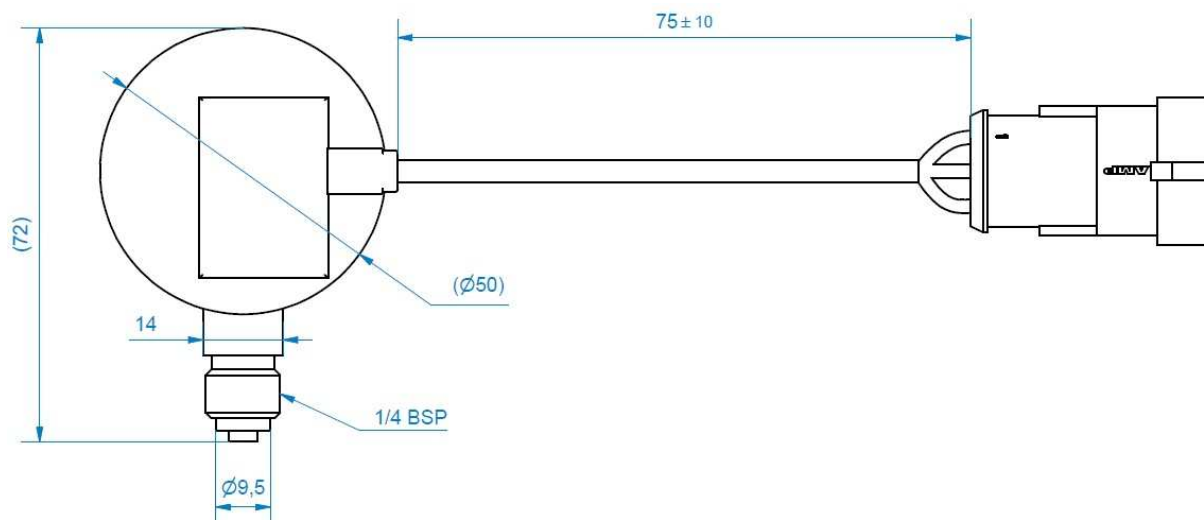


1.4 Photographs



	ENGINEERING SPECIFICATION	Nº EI-6094
		Rev.: 00
		Page: 1 de 3
PRODUCT NAME FSS PRESSURE GAUGE WITH SENSOR MGN5	CODE Nº 3046094	DRAWING Nº --

Diagram

**NOTE:** dimensions (mm).

▪ **STANDARD FEATURES:**

• Mechanical Specifications:

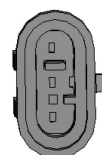
1. Diameter: 50mm (nominal).
2. Housing: Steel, epoxy black paint.
3. Class of accuracy: 2,5.
4. Scale: 0 ~ 400 bar.
5. Working range: 0 ~ 260 bar.
6. Connection: Copper alloy, lower male thread ¼ BSP.
7. Movement: Copper alloy.

▪ Electrical Specifications:

1. Working voltage: 5 ~ 10V.
2. Connector: Tyco Super Seal plug housing (P/N: 282105-1).
3. Connection:

Pin #	Wire (Colour)	Function
P1-1	Black	GND
P1-2	White	Vout
P1-3	Green	+Vcc

PIN

 3
 2
 1


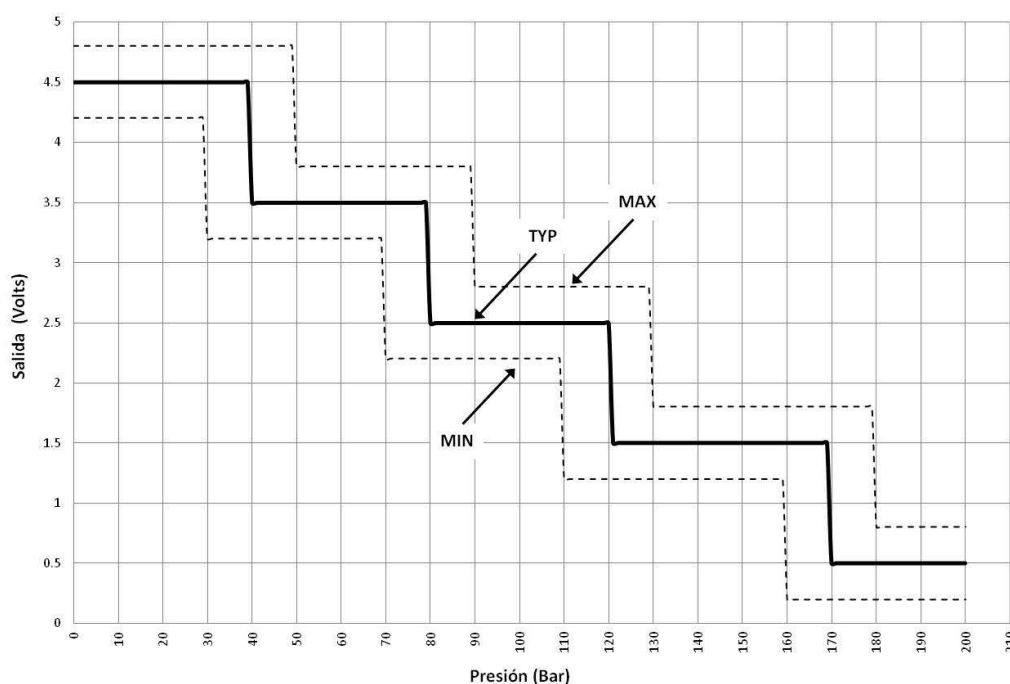
Visto de frente

30/09/11	ING-1131	F. Juri	D. Crespo				
Issue date	Report	Made by	Approval	Issue date	Report	Made by	Approval

	ENGINEERING SPECIFICATION	Nº EI-6094
		Rev.: 00
		Page: 2 de 3
PRODUCT NAME FSS PRESSURE GAUGE WITH SENSOR MGN5	CODE Nº 3046094	DRAWING Nº --

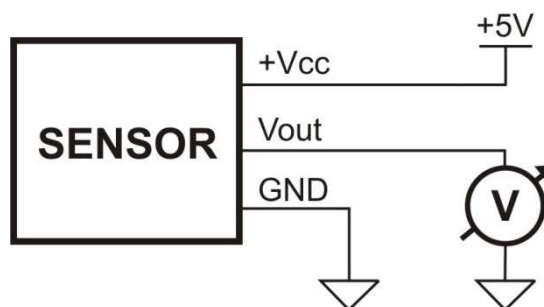
▪ **SENSOR FEATURES:**

1. Output transfer for +5V supply voltage:



NOTE: output voltage proportional to the supply voltage.

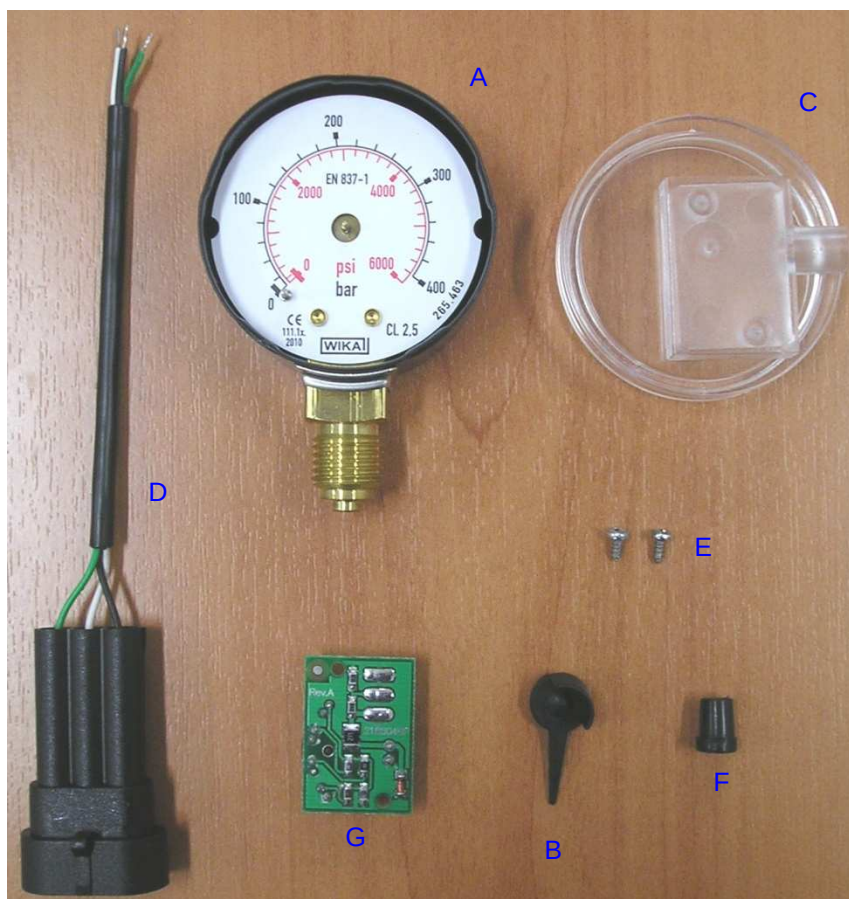
2. Test circuit:



30/09/11	ING-1131	F. Juli	D. Crespo				
Issue date	Report	Made by	Approval	Issue date	Report	Made by	Approval

	ENGINEERING SPECIFICATION	Nº EI-6094
		Rev.: 00
		Page: 3 de 3
PRODUCT NAME FSS PRESSURE GAUGE WITH SENSOR MGN5		CODE Nº 3046094
		DRAWING Nº --

Subassembly components.



NOTE: Photographs are for illustrative purposes only, they are subject to change following revision of each component.

ESPECIFICACIONES:

Ref.	Code	Description	Quantity	Drawing	Specification
A	2186039	Pressure gauge without indication	1	-	EI-6039
B	2026091	Pressure Gauge Sensor Pointer	1	6091	-
C	2026086	Acrylic Pressure Gauge cover	1	6086	-
D	2196117	Cable for MGN5 Pressure Gauge	1	-	EI-6117
E	2096087	Screw Nº 2 - Pressure Gauge Sensor	2	6087	-
F	2026098	Cable Bushing	1	6098	-
G	2186096	MGN5 Pressure Gauge Circuit Board	1	6096	EI-6096

REMARKS:

30/09/11	ING-1131	F. Juri	D. Crespo				
Issue date	Report	Made by	Approval	Issue date	Report	Made by	Approval

	ENGINEERING SPECIFICATION	Nº EI-6107
		Revision: 01
		Page: 1 de 1
Material Denomination SUBASSEMBLY MANOMETER MGN5 TA	Part Number 3046107	Schematic Nº --

Subassembly Components



Illustrative photo, refer to schematic or engineering specification of each component for last revision.

SPECIFICATIONS:

Ref.	Código	Descripción	Cantidad	Plano	Especificación
A	2087404	Arandela 6.3x9.8x2	1	7404	-
B	2057964	Bolsa de Polietileno 150x100x0.1	1	-	EI-7964
C	2186094	Manómetro con Sensor y Cable FSS	1	-	EI-6094
D	2027402	Tapón Protector Rosca 1/4 NPT	1	7402	-
E	2236010	Folleto Instalación y Montaje Manómetro	1	-	EI-6010
F	2016054	Etiqueta Garantía TA-OK	1	-	EI-6054
G	2013061	Formato de Impresión Estampilla B. V. Gas	1	-	EI-3061
H	2016108	Etiqueta Serie y Código de Barras Manómetro TA	1	-	EI-6108

Notes:

11/10/11	--	F. Juri	D. Crespo	--	--	--	--
Issue Date	Report	Made By	Approval	Revision Date	Report	Made By	Approval

	ENGINEERING SPECIFICATION	Nº EI-6108
		Revision: 01
		Page: 1 of 1
Material Denomination Serial Number and Bar Code Stickers Manometer MGN5 TA	Part Number 2016108	Schematic Nº -

Sticker 1 (Manometer Serial Number)



Sticker 2 (Plastic Bag)

**NOTE:** Graphics out of scale.**Specifications:**

- Material y dimensions:
 - Sticker 1, grey polyester 75x25mm, specification EI-9937, printed with ribbon RN8345.
 - Sticker 2, white paper 50x25mm, specification EI-9949.

- Typographies:

Ref.	Font	Style	Size
A	Arial	Bold	6
B	Arial	Bold	14
C	Arial	Bold	12
D	Accordingly R110 – Rev. 2 – Annex 2A		

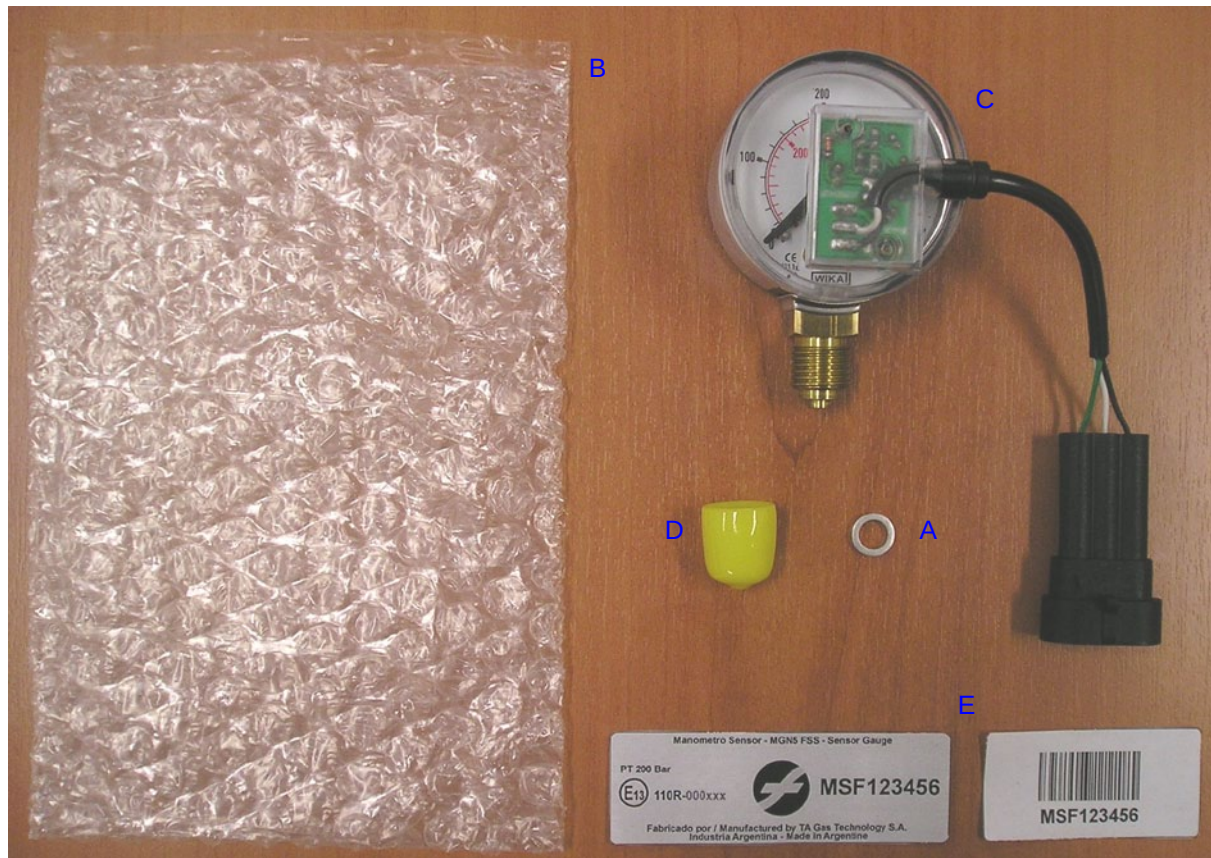
- Bar code type: CODE 128 A.
- Quantity: 1 of each.
- Source file: 2016108 – Rev01.btw.

Notes:

11/09/11	ING-	F. Juri	D. Crespo				
Issue Date	Report	Made By	Approval	Revision Date	Report	Made By	Approval

	ENGINEERING SPECIFICATION	Nº EI-6119
		Revision: 00
		Page: 1 de 1
Material Denomination SUBASSEMBLY MANOMETER MGN5 FSS	Part Number 3046119	Schematic Nº --

Components Subassembly



Illustrative photo, refer to schematic or engineering specification of each component for last revision.

SPECIFICATIONS:

Ref.	Code	Description	Qty	Schematic	Specification
A	2087404	Arandela 6.3x9.8x2	1	7404	-
B	2057976	Bolsa Burbupack 180x120	1	-	EI-7976
C	2186094	Manómetro con Sensor y Cable FSS	1	-	EI-6094
D	2027402	Tapón Protector Rosca 1/4 NPT	1	7402	-
E	2016120	Etiqueta Serie y Código de Barras Manómetro FSS	1	-	EI-6120

Notes:

11/10/11	--	F. Juri	D. Crespo	--	--	--	--
Issue Date	Report	Made By	Approval	Revision Date	Report	Made By	Approval

	ENGINEERING SPECIFICATION	Nº EI-6120
		Revision: 00
		Page: 1 of 1
Material Denomination Serial Number and Bar Code Stickers Manometer FSS	Part Number 2016120	Schematic Nº -

Sticker 1 (Manometer Serial Number)



Sticker 2 (Plastic Bag)

**NOTE:** Graphics out of scale.**Specifications:**

- Material y dimensions:
 - Sticker 1, grey polyester 75x25mm, specification EI-9937, printed with ribbon RN8345.
 - Sticker 2, white paper 50x25mm, specification EI-9949.

- Typographies:

Ref.	Font	Style	Size
A	Arial	Bold	6
B	Arial	Bold	14
C	Arial	Bold	12
D	Accordingly R110 – Rev. 2 – Annex 2A		

- Bar code type: CODE 128 A.
- Quantity: 1 of each.
- Source file: 2016120 – Rev00.btw.

Notes:

11/09/11	ING-	F. Juri	D. Crespo				
Issue Date	Report	Made By	Approval	Revision Date	Report	Made By	Approval

	ENGINEERING SPECIFICATION	Nº EI-6121
		Revision: 00
		Page: 1 de 1
Material Denomination SUBASSEMBLY MANOMETER MGN5 BRC	Part Number 3046121	Schematic Nº --

Components Subassembly



Illustrative photo, refer to schematic or engineering specification of each component for last revision.

SPECIFICATIONS:

Ref.	Code	Description	Qty	Schematic	Specification
A	2087404	Arandela 6.3x9.8x2	1	7404	-
B	2057976	Bolsa Burbupack 180x120	1	-	EI-7976
C	2186094	Manómetro con Sensor y Cable MGN5 FSS	1	-	EI-6094
D	2027402	Tapón Protector Rosca 1/4 NPT	1	7402	-
E	2016120B	Etiqueta Serie y Código de Barras Manómetro BRC	1	-	EI-6120B

Notes:

11/10/11	--	F. Juri	D. Crespo	--	--	--	--
Issue Date	Report	Made By	Approval	Revision Date	Report	Made By	Approval

	ENGINEERING SPECIFICATION	Nº EI-6120B
		Revision: 00
		Page: 1 of 1
Material Denomination Serial Number and Bar Code Stickers Manometer BRC	Part Number 2016120B	Schematic Nº -

Sticker 1 (Manometer Serial Number)



Sticker 2 (Plastic Bag)

**NOTE:** Graphics out of scale.**Specifications:**

- Material y dimensions:
 - Sticker 1, grey polyester 75x25mm, specification EI-9937, printed with ribbon RN8345.
 - Sticker 2, white paper 50x25mm, specification EI-9949.

- Typographies:

Ref.	Font	Style	Size
A	Arial	Bold	6
B	Arial	Bold	14
C	Arial	Bold	12
D	Accordingly R110 – Rev. 2 – Annex 2A		

- Bar code type: CODE 128 A.
- Quantity: 1 of each.
- Source file: 2016120B – Rev00.btw.

Notes:

11/09/11	ING-	F. Juri	D. Crespo				
Issue Date	Report	Made By	Approval	Revision Date	Report	Made By	Approval



ENGINEERING SPECIFICATION

Nº
EI-6122

Revision: 00

Page: 1 de 1

Material Denomination
SUBASSEMBLY MANOMETER MGN5 MTM

Part Number
3046122

Schematic Nº
--

Components Subassembly



Illustrative photo, refer to schematic or engineering specification of each component for last revision.

SPECIFICATIONS:

Ref.	Code	Description	Qty	Schematic	Specification
A	2087404	Arandela 6.3x9.8x2	1	7404	-
B	2057976	Bolsa Burbupack 180x120	1	-	EI-7976
C	2186094	Manómetro con Sensor y Cable MGN5 FSS	1	-	EI-6094
D	2027402	Tapón Protector Rosca 1/4 NPT	1	7402	-
E	2016120C	Etiqueta Serie y Código de Barras Manómetro MTM	1	-	EI-6120C

Notes:

11/10/11	--	F. Juri	D. Crespo	--	--	--	--
Issue Date	Report	Made By	Approval	Revision Date	Report	Made By	Approval

	ENGINEERING SPECIFICATION	Nº EI-6120C
		Revision: 00
		Page: 1 of 1
Material Denomination Serial Number and Bar Code Stickers Manometer MTM	Part Number 2016120C	Schematic Nº -

Sticker 1 (Manometer Serial Number)

Manometro Sensor - MGN5 MTM - Sensor Gauge

PT/WP 260 bar

MTM

MSM123456

Fabricado por / Manufactured by TA Gas Technology S.A.
Industria Argentina - Made in Argentina

Sticker 2 (Plastic Bag)



MSM123456

NOTE: Graphics out of scale.**Specifications:**

- Material y dimensions:
 - Sticker 1, grey polyester 75x25mm, specification EI-9937, printed with ribbon RN8345.
 - Sticker 2, white paper 50x25mm, specification EI-9949.

- Typographies:

Ref.	Font	Style	Size
A	Arial	Bold	6
B	Arial	Bold	14
C	Arial	Bold	12
D	Accordingly R110 – Rev. 2 – Annex 2A		

- Bar code type: CODE 128 A.
- Quantity: 1 of each.
- Source file: 2016120C – Rev00.btw.

Notes:

11/09/11	ING-	F. Juri	D. Crespo				
Issue Date	Report	Made By	Approval	Revision Date	Report	Made By	Approval

	ESPECIFICACIÓN DE INGENIERÍA		Nº EI-6123
			Revision: 00
			Page: 1 de 1
Material Denomination SUBASSEMBLY MANOMETER MGN5 IMPCO		Part Number 3046123	Schematic Nº --

Components Subassembly



Illustrative photo, refer to schematic or engineering specification of each component for last revision.

SPECIFICATIONS:

Ref.	Code	Description	Qty	Schematic	Specification
A	2087404	Arandela 6.3x9.8x2	1	7404	-
B	2057976	Bolsa Burbupack 180x120	1	-	EI-7976
C	2186094	Manómetro con Sensor y Cable MGN5 FSS	1	-	EI-6094
D	2027402	Tapón Protector Rosca 1/4 NPT	1	7402	-
E	2016120D	Etiqueta Serie y Código de Barras Manómetro IMPCO	1	-	EI-6120D

Notes:

11/10/11	--	F. Juri	D. Crespo	--	--	--	--
Issue Date	Report	Made By	Approval	Revision Date	Report	Made By	Approval

	ENGINEERING SPECIFICATION	Nº EI-6120D
		Revision: 00
		Page: 1 of 1
Material Denomination Serial Number and Bar Code Stickers Manometer IMPCO	Part Number 2016120D	Schematic Nº -

Sticker 1 (Manometer Serial Number)

Manometro Sensor - MGN5 IMPCO - Sensor Gauge

PT/WP 260 bar

(E13) 110R-000xxx



MSO123456

Fabricado por / Manufactured by TA Gas Technology S.A.
Industria Argentina - Made in Argentina

Sticker 2 (Plastic Bag)



MSO123456

NOTE: Graphics out of scale.**Specifications:**

- Material y dimensions:
 - Sticker 1, grey polyester 75x25mm, specification EI-9937, printed with ribbon RN8345.
 - Sticker 2, white paper 50x25mm, specification EI-9949.

- Typographies:

Ref.	Font	Style	Size
A	Arial	Bold	6
B	Arial	Bold	14
C	Arial	Bold	12
D	Accordingly R110 – Rev. 2 – Annex 2A		

- Bar code type: CODE 128 A.
- Quantity: 1 of each.
- Source file: 2016120D – Rev00.btw.

Notes:

11/09/11	ING-	F. Juri	D. Crespo				
Issue Date	Report	Made By	Approval	Revision Date	Report	Made By	Approval

	ENGINEERING SPECIFICATION	Nº EI-6124
		Revision: 00
		Page: 1 de 1
Material Denomination SUBASSEMBLY MANOMETER MGN5 KIT MTM	Part Number 3046124	Schematic Nº --

Components Subassembly



Illustrative photo, refer to schematic or engineering specification of each component for last revision.

SPECIFICATIONS:

Ref.	Code	Description	Qty	Schematic	Specification
A	2087404	Arandela 6.3x9.8x2	1	7404	-
B	2057976	Bolsa Burbupack 180x120	1	-	EI-7976
C	2186094	Manómetro con Sensor y Cable MGN5 FSS	1	-	EI-6094
D	2027402	Tapón Protector Rosca 1/4 NPT	1	7402	-
E	2016120E	Etiqueta Serie y Código de Barras Manómetro Kit MTM	1	-	EI-6120E

Notes:

11/10/11	--	F. Juri	D. Crespo	--	--	--	--
Issue Date	Report	Made By	Approval	Revision Date	Report	Made By	Approval

	ENGINEERING SPECIFICATION	Nº EI-6120E
		Revision: 00
		Page: 1 of 1
Material Denomination Serial Number and Bar Code Stickers Manometer MGN5 Kit MTM		Part Number 2016120E Schematic Nº -

Sticker 1 (Manometer Serial Number)

Manometro Sensor - MGN5 Kit MTM - Sensor Gauge

PT/WP 260 bar

(E13) 110R-000xxx

Kit MTM

MSK123456

Fabricado por / Manufactured by TA Gas Technology S.A.
Industria Argentina - Made in Argentina

Sticker 2 (Plastic Bag)



MSK123456

NOTE: Graphics out of scale.**Specifications:**

1. Material y dimensions:
 - a. Sticker 1, grey polyester 75x25mm, specification EI-9937, printed with ribbon RN8345.
 - b. Sticker 2, white paper 50x25mm, specification EI-9949.

2. Typographies:

Ref.	Font	Style	Size
A	Arial	Bold	6
B	Arial	Bold	14
C	Arial	Bold	12
D	Accordingly R110 – Rev. 2 – Annex 2A		

3. Bar code type: CODE 128 A.
4. Quantity: 1 of each.
5. Source file: 2016120E – Rev00.btw.

Notes:

11/09/11	ING-	F. Juri	D. Crespo				
Issue Date	Report	Made By	Approval	Revision Date	Report	Made By	Approval

	ENGINEERING SPECIFICATION	Nº EI-6126
		Revision: 00
		Page: 1 de 1
Material Denomination SUBASSEMBLY MANOMETER MGN5 ZAVOLI	Part Number 3046126	Schematic Nº --

Components Subassembly



Illustrative photo, refer to schematic or engineering specification of each component for last revision.

SPECIFICATIONS:

Ref.	Code	Description	Qty	Schematic	Specification
A	2087404	Arandela 6.3x9.8x2	1	7404	-
B	2057976	Bolsa Burbupack 180x120	1	-	EI-7976
C	2186094	Manómetro con Sensor y Cable MGN5 FSS	1	-	EI-6094
D	2027402	Tapón Protector Rosca 1/4 NPT	1	7402	-
E	2016120F	Etiqueta Serie y Código de Barras Manómetro ZABOLI	1	-	EI-6120F

Notes:

11/10/11	--	F. Juri	D. Crespo	--	--	--	--
Issue Date	Report	Made By	Approval	Revision Date	Report	Made By	Approval

	ENGINEERING SPECIFICATION	Nº EI-6120F
		Revision: 00
		Page: 1 of 1
Material Denomination Serial Number and Bar Code Stickers Manometer ZAVOLI	Part Number 2016120F	Schematic Nº -

Sticker 1 (Manometer Serial Number)



Sticker 2 (Plastic Bag)

**NOTE:** Graphics out of scale.**Specifications:**

- Material y dimensions:
 - Sticker 1, grey polyester 75x25mm, specification EI-9937, printed with ribbon RN8345.
 - Sticker 2, white paper 50x25mm, specification EI-9949.

- Typographies:

Ref.	Font	Style	Size
A	Arial	Bold	6
B	Arial	Bold	14
C	Arial	Bold	12
D	Accordingly R110 – Rev. 2 – Annex 2A		

- Bar code type: CODE 128 A.
- Quantity: 1 of each.
- Source file: 2016120F – Rev00.btw.

Notes:

11/09/11	ING-	F. Juri	D. Crespo				
Issue Date	Report	Made By	Approval	Revision Date	Report	Made By	Approval

	ENGINEERING SPECIFICATION	Nº EI-6127
		Revision: 00
		Page: 1 de 1
Material Denomination SUBASSEMBLY MANOMETER MGN5 GFI	Part Number 3046127	Schematic Nº --

Componentes del Subconjunto



Illustrative photo, refer to schematic or engineering specification of each component for last revision.

SPECIFICATIONS:

Ref.	Code	Description	Qty	Schematic	Specification
A	2087404	Arandela 6.3x9.8x2	1	7404	-
B	2057976	Bolsa Burbupack 180x120	1	-	EI-7976
C	2186094	Manómetro con Sensor y Cable MGN5 FSS	1	-	EI-6094
D	2027402	Tapón Protector Rosca 1/4 NPT	1	7402	-
E	2016120G	Etiqueta Serie y Código de Barras Manómetro GFI	1	-	EI-6120G

Notes:

11/10/11	--	F. Juri	D. Crespo	--	--	--	--
Issue Date	Report	Made By	Approval	Revision Date	Report	Made By	Approval



ENGINEERING SPECIFICATION

Nº EI-6120G

Revision: 00

Page: 1 of 1

Material Denomination
Serial Number and Bar Code Stickers
Manometer GFI

Part Number
2016120G

Schematic N°

Sticker 1 (Manometer Serial Number)

The diagram shows a gas sensor gauge with the following labels:

- A**: Manometro Sensor - MGN5 GFI - Sensor Gauge
- B**: MSI123456
- C**: PT/WP 260 bar
- D**: E13 110R-000xxx

The gauge also features the Gfi logo and the text: Fabricado por / Manufactured by TA Gas Technology S.A. Industria Argentina - Made in Argentina.

Sticker 2 (Plastic Bag)



NOTE: Graphics out of scale.

Specifications:

1. Material y dimensions:
 - a. Sticker 1, grey polyester 75x25mm, specification EI-9937, printed with ribbon RN8345.
 - b. Sticker 2, white paper 50x25mm, specification EI-9949.

- ## 2. Typographies:

Ref.	Font	Style	Size
A	Arial	Bold	6
B	Arial	Bold	14
C	Arial	Bold	12
D	Accordingly R110 – Rev. 2 – Annex 2A		

3. Bar code type: CODE 128 A.
4. Quantity: 1 of each.
5. Source file: 2016120G – Rev00.btw.

Notes:

11/09/11	ING-	F. Juri	D. Crespo				
Issue Date	Report	Made By	Approval	Revision Date	Report	Made By	Approval