Repubblica di San Marino
Autorità per l'Omologazione
Republic of San Marino
Authority for Homologation

Via Consiglio dei Sessanta, 99
47891 Dogana - Repubblica di San Marino

Comunicazione
Communication

E57	Concernente [2/] *Concerning [2/]*	**Il rilascio dell'omologazione** ***Approval granted*** ~~L'estensione dell'omologazione~~ ~~*Approval extended*~~ ~~Il rifiuto dell'omologazione~~ ~~*Approval refused*~~ ~~La revoca dell'omologazione~~ ~~*Approval withdrawn*~~ ~~La cessazione definitiva della produzione~~ ~~*Production definitively discontinued*~~

of a vehicle type with regard to braking pursuant to Regulation No 13

Omologazione N. ***Approval No.***	**E57*13R11/19*0542**	**Estensione N.** ***Extension No.***	**00**

Marchio di omologazione ***Approval mark***	E57 **13R – 11 0542**

1. Trade name or mark of the vehicle: TECNOCARAVAN
2. Vehicle category: M1
3. Vehicle type: **TFR1**
4. Manufacturer's name and address: **TECNOCARAVAN di Damiani Viller srl**
   Via Medicine, 1918
   41057 S. Vito di Spilamberto – MODENA
5. If applicable, name and address of manufacturer's representative: Not applicable
6. Mass of vehicle:

6.1. Maximum mass of vehicle:	3500 - 4500 kg
6.2. Minimum mass of vehicle:	See Information documento No. TFR1-00
7. Distribution of mass of each axle (maximum value):	See Information documento No. TFR1-00
8. Make and type of brake linings, discs and drums:	
8.1. Brake linings	
8.1.1. Brake linings tested to all relevant prescriptions of Annex 4:	Front axle: See Information documento No. TFR1-00 Rear axle: See Information documento No. TFR1-00
8.1.2. Alternative brake linings tested in Annex 15:	Not applicable
8.2. Brake discs and drums	
8.2.1. Identification code of brake discs covered by the braking system approval	Make and type: See Information documento No. TFR1-00
8.2.2. Identification code of brake drums covered by the braking systems approval	Not Applicable
9. In the case of a power driven vehicle:	
9.1. Engine type:	See Information documento No. TFR1-00
9.2. Number and ratios of gears:	See Information documento No. TFR1-00
9.3. Final drive ratio(s):	See Information documento No. TFR1-00
9.4. If applicable[(2)], maximum mass of trailer which may be coupled.	
9.4.1. Full trailer:	See Information documento No. TFR1-00
9.4.2. Semi-trailer:	Not applicable
9.4.3. Centre-axle trailer:	See Information documento No. TFR1-00
(Indicate also the maximum ratio of the coupling overhang [(2)] to the wheelbase):	
9.4.4. Unbraked trailer:	See Information documento No. TFR1-00
9.4.5. Maximum mass of combination:	See Information documento No. TFR1-00

9.4.6.	The power-driven vehicle is / is not[2] authorised to tow more than one trailer of Category O3 or O4.	Not Applicable
10.	Tyre dimensions:	See Information documento No. TFR1-00
10.1.	Temporary-use spare wheel/tyre dimensions:	See Information documento No. TFR1-00
11.	Number and arrangement of axles:	See Information documento No. TFR1-00
12.	Brief description of braking equipment:	Electronic controlled brake distributiom, Anti-lock braking, front/rear split, ventilated discs on front axle, drum brakes on rear axle

13.

Mass of vehicle when tested:	Unladen (kg)	Laden (kg)
King pin/ supporting load (2)	See Inspection Report No. ATS-SM-IR-13-23892	
Axle No 1		
Axle No 2		
Axle No.3		
Axle No.4		
TOTAL:		

14. Result of the tests and vehicle characteristics

Test results			Test speed [km/h]	Measured performance [m] / [m/s^2]	Measured force applied to control [daN]
14.1.	Type-0 tests, engine disconnected	Service braking (laden)	See Inspection Report No. ATS-SM-IR-13-23892		
		Secondary braking (laden)			
14.2.	Type-0 tests, engine connected	Service braking in accordance with paragraph 2.1.1. of Annex 4 (laden)			
14.3.	Type-I tests	With repeated braking (4)			
		With continuous braking (5)			
		Free running, in accordance with Annex 4, paragraph 1.5.4.5 and Annex 4, paragraph 1.7.3.7			
14.4.	Type-~~II~~ or IIA2 tests, as appropriate:	Service braking			
14.5.	Type-III tests(4)	Free running, in accordance with Annex 4, paragraph 1.7.3.			

14.6. Braking system(s) used during the Type II/IIA [1] test	Not applicable
14.7 Reaction time and dimensions of flexible pipes:	See Inspection Report No. ATS-SM-IR-13-23892
14.7.1 Reaction time at the brake actuator	See Inspection Report No. ATS-SM-IR-13-23892
14.7.2 Reaction time at the control line coupling head:	See Inspection Report No. ATS-SM-IR-13-23892
14.7.3 Flexible pipes of tractors / towing trailers[2] for semi-trailers:	Not applicable
length (m):	Not applicable
internal diameter (mm):	Not applicable

14.8. Information required under paragraph 7.3 of Annex 10 to this Regulation: ~~YES~~/NO [1]

14.9. Vehicle ~~is~~ / is not [1] equipped to tow trailer with electrical braking systems.

14.10. Vehicle is / ~~is not~~ [1] equipped with an anti-lock system

14.10.1. Category of anti-lock system:	category 1/~~2/3~~ [1] [5] ~~category A/B~~ [1] [6]
14.10.2. The vehicle fulfils the requirements of Annex 13:	YES/~~NO~~ [1]

14.10.3. Vehicle ~~is~~/is not [1] equipped to tow trailers equipped with anti-lock systems

14.10.4. Where an Annex 19 anti-lock test report has been utilized, the test report number(s) shall be stated:	Not applicable
14.11. The vehicle is subject to the requirements of annex 5 (ADR):	~~YES~~/NO [1]
14.11.1. The vehicle fulfils the endurance braking performance requirements according to the Type-IIA test up to a total maximum mass of ..... tonnes:	~~YES/NO~~ [1]
14.11.2 The power-driven vehicle is fitted with a control device for the endurance braking system on the trailer:	~~YES/NO~~ [1]
14.11.3. In the case of trailers, the vehicle is equipped with an endurance braking system:	~~YES/NO~~ [1]
14.12. Vehicle is equipped with a control line(s) according to paragraphs 5.1.3.1.1./5.1.3.1.2./5.1.3.1.3. [1]	Not applicable
14.13 Adequate documentation according to Annex 18 was supplied in respect of the following system(s):	YES/~~NO~~/~~NOT APPLICABLE~~ [1]
14.14. The vehicle is equipped with a vehicle stability function:	YES/~~NO~~ [1]
If yes:	
The vehicle stability function has been tested according to and fulfils the requirements of Annex 21:	YES/~~NO~~ [1]

Vehicle stability function is optional equipment:	~~YES~~/NO (1)
Vehicle stability function includes directional control:	YES/~~NO~~ (1)
Vehicle stability function includes roll-over control:	YES/~~NO~~ (1)
14.14.1. Where an Annex 19 test report has been utilised, the test report number shall be stated:	Not applicable
14.15. The vehicle is equipped with an automated connector:	~~YES~~/NO (1)
14.15.1. If yes, does the automated connector fulfil the requirements of Annex 22:	~~YES/NO~~ (1)
14.15.2. The automated connector is of category A/B/C/D (1)	~~A/B/C/D~~ (1)
14.16 The towing trailer is / is not[1] authorised to tow a trailer of Category O_3 or O_4	Not Applicable
14.17 The trailer is / is not[1] authorised to be towed by a towing trailer (of Category O_3 or O_4)	Not Applicable
15. Additional information for use with the Annex 20 alternative type approval procedure.	Not applicable
15.1 Description of suspension:	Not applicable
15.1.1. Manufacturer:	Not applicable
15.1.2. Make:	Not applicable
15.1.3. Type:	Not applicable
15.1.4. Model:	Not applicable
15.2. Wheelbase of vehicle tested:	Not applicable
15.3. Actuation differential (if any) within axle group:	Not applicable
16. Trailer approved utilising Annex 20 procedure: (If yes, Appendix 2 to this annex shall be completed)	~~YES / NO~~ (1)

17.	Vehicle submitted for approval on:	30/07/2025
18.	Technical service responsible for conducting approval tests:	**AUTOMOTIVE TECHNICAL SERVICE S.r.l.** Via Consiglio dei Sessanta 99 47891 Dogana – Repubblica di San Marino
19.	Date of report issued by that Service:	30/07/2025
20.	Number of report issued by that Service:	ATS-SM-IR-13-23892
21.	Approval	**GRANTED**/~~REFUSED/EXTENDED/WITHDRAWN~~ (1)
22.	Position of approval mark on the vehicle:	See Information documento No. TFR1-00
23.	Place:	DOGANA – Repubblica di San Marino
24.	Date:	01/08/2025
25.	Signature:	

Ing. Marco CONTI
General Director

26. The summary referred to in paragraph 4.3 of this Regulation is annexed to this communication.

(1) Strike out what does not apply.
(2) In the case of a semi-trailer or centre axle trailer, enter the mass corresponding to the load on the coupling device.
(3) "Coupling overhang" is the horizontal distance between the coupling for centre-axle trailers and the centreline of the rear axle(s).
(4) Applies only to vehicles of categories O_4.
(5) Applies only to power-driven vehicles.
(6) Applies only to vehicles of categories O_2, O_3 and O_4.

APPENDIX 1*

List of vehicle data for the purpose of regulation No. 90 approvals

1. Description of the vehicle type:	Vehicle fitted with front disc and rear drum brakes
1.1. Trade name or mark of the vehicle, if available:	FORD / ADRIA (e1*2007/46*1100 and e1*2007/46*1098) Or MAN / ADRIA (e1*2007/46*1627 and e1*2007/46*1626) Or VOLKSWAGEN / ADRIA (e1*2007/46*1613**)** Or FIAT / ADRIA (e3*2007/46*0049 and e3*2007/46*0044) Or CITROEN / ADRIA (e3*2007/46*0051 and e3*2007/46*0046)
1.2. Vehicle category:	M1
1.3. Vehicle type according to Regulation No: 13 approval:	TFR1
1.4. Models or trade names of vehicles constituting the vehicle type, if available	Transit
1.5. Manufacturer's name and address:	**TECNOCARAVAN di Damiani Viller srl** Via Medicine, 1918 41057 S. Vito di Spilamberto – MODENA
2. Make and type of brake linings, discs and drums:	
2.1. Brake linings	
2.1.1. Brake linings tested to all relevant prescriptions of Annex 4:	Front axle: See Information documento No. TFR1-00 Rear axle: See Information documento No. TFR1-00
2.1.2. Alternative brake linings tested in Annex 15:	Not applicable
2.2. Brake disc and drums:	
2.2.1. Identification code of brake discs covered by the braking system approval:	Front axle: See Information documento No. TFR1-00 Rear axle: See Information documento No. TFR1-00
2.2.2. Identification code of brake drums covered by the braking system approval:	Not Applicable
3. Minimum mass of vehicle:	See Information documento No. TFR1-00
3.1. Distribution of mass of each axle (maximum value):	See Information documento No. TFR1-00
4. Maximum mass of vehicle	3500 - 4500 kg

4.1.	Distribution of mass of each axle (maximum value):	See Information documento No. TFR1-00
5.	Maximum vehicle speed:	130 km/h
6.	Tyre and wheel dimensions:	See Information documento No. TFR1-00
7.	Brake circuit configuration (e.g. front/rear or diagonal split):	See Information documento No. TFR1-00
8.	Declaration of which is the secondary braking system:	Rear
9.	Specifications of brake valves (if applicable):	Not applicable
9.1.	Adjustment specifications of the load sensing valve:	Not applicable
9.2.	Setting of pressure valve:	Not applicable
10.	Designed brake force distribution:	Via electronic control (EBD) See manufacturers documentation
11.	Specification of brake:	
11.1.	Disc brake type (e.g. number of pistons with diameter(s), ventilated or solid disc):	Front axle: See Information documento No. TFR1-00 Rear axle: See Information documento No. TFR1-00
11.2.	Drum brake type (e.g. duo servo, with piston size and drum dimensions):	Not Applicable
11.3.	In the case of compressed air brake systems, e.g. type and size of chambers, levers, etc.:	Not applicable
12.	Master cylinder type and size:	See Information documento No. TFR1-00
13.	Booster type and size:	See Information documento No. TFR1-00

- *At the request of (an) applicant(s) for Regulation No. 90 approval, the information shall be provided by the Type Approval Authority as contained in appendix 1 to this annex. However, this information shall not be provided for purposes other than Regulation No. 90 approvals.*

APPENDIX 2

Type approval certificate concerning the vehicle braking equipment

1. General

The following additional items are to be recorded when the trailer has been approved utilizing the alternative procedure defined in Annex 20 to this Regulation:

2. Annex 19 test reports

2.1. Diaphragm brake chambers: Report No.	Not Applicable
2.2. Spring Brakes: Report No.	Not Applicable
2.3. Trailer brake cold performance characteristics: Report No.	Not Applicable
2.4. Anti-lock braking system: Report No.	Not Applicable
3. Performance checks	Not applicable
3.1. The trailer fulfils the requirements of Annex 4, paragraphs 3.1.2. and 1.2.7 (service braking cold performance)	Not Applicable
3.2. The trailer fulfils the requirements of Annex 4, paragraph 3.2. (parking braking cold performance)	Not Applicable
3.3. The trailer fulfils the requirements of Annex 4, paragraph 3.3. (emergency/automatic braking performance)	Not Applicable
3.4. The trailer fulfils the requirements of Annex 10, paragraph 6. (braking performance in the case a failure in the braking distribution system)	Not Applicable
3.5. The trailer fulfils the requirements of paragraph 5.2.2.14.1. to this Regulation (braking performance in the event of leakage from auxiliary equipment)	Not Applicable
3.6. The trailer fulfils the requirements of Annex 13 (anti-lock braking)	Not Applicable

(1) Strike out what does not apply.

Allegato *Enclosure*				
Al certificato di omologazione ECE N. *To ECE approval certificate No.*		**E57*13R11/19*0542*00**		
Indice del fascicolo di omologazione *Index to the information package*				
Data *Date of issue*	**01/08/2025**	**Data ultima modifica** *Last amendment date*	--	
1.	***Clausole di garanzia e istruzioni sul diritto di presentare ricorso*** *Collateral clauses and instruction on right to appeal*			
2.	**Rapporto(i) di Ispezione No.** *Test report(s) No.*	**ATS-SM-IR-13-23892**	**Data** *Date*	**30/07/2025**
3.	**Scheda informativa N.** *Information document No.*	**SI/TFR1-00**	**Data** *Date*	**02/07/2025**
			Data ultima modifica *Last amendment date*	--

Clausole di garanzia e istruzioni sul diritto di presentare ricorso

Clausole di garanzia

La produzione in serie deve essere esattamente conforme ai documenti di omologazione. Le variazioni di produzione in serie sono consentite solo con il consenso espresso del **Autorità per l'Omologazione**.

Le variazioni del nome della società, l'indirizzo e lo stabilimento di produzione, nonché una delle parti che hanno l'autorità alla consegna o eventuali rappresentanti nominati al momento del rilascio dell'omologazione, devono essere immediatamente comunicate al **Autorità per l'Omologazione**. La violazione di queste regole può portare al ritiro dell'omologazione ed inoltre può essere legalmente perseguita.

L'omologazione decade se viene restituita o ritirata o se il tipo omologato non è più conforme ai requisiti di legge. La revoca può essere fatta se non esistono più i requisiti richiesti per il rilascio e la continuazione dell'omologazione, se il titolare dell'omologazione viola gli obblighi dettati dall'omologazione, anche nel caso in cui gli obblighi derivino dalle condizioni assegnate all'interno dell'omologazione, o se è accertato che il tipo approvato non è conforme ai requisiti di sicurezza del traffico e di tutela dell'ambiente.

L'**Autorità per l'Omologazione** può verificare la corretta applicazione della delega conferita rilasciata nella presente omologazione, in qualsiasi momento. In particolare, questo include la verifica della produzione, che sia conforme, nonché le misure di controllo di conformità della produzione. Per questo, possono essere presi dei campioni dalla produzione. I dipendenti o rappresentanti dell'**Autorità per l'Omologazione** possono avere accesso senza ostacoli agli impianti di produzione e stoccaggio.

La delega conferita contenuta nella presente omologazione non è trasferibile. I diritti del marchio di terzi non sono interessati da questa omologazione.

Istruzione su diritto di ricorso

Questa omologazione è appellabile entro un mese dalla notifica. Il ricorso deve essere presentato per iscritto o come una domanda inviata all' **Autorità per l'Omologazione** - Via Consiglio dei Sessanta, 99 - 47891 Dogana - Repubblica di San Marino.

********** **********

Collateral clauses and instruction on right to appeal

Collateral clauses

*The individual production of serial fabrication must be in exact accordance with the approval documents. Changes in the individual production are only allowed with express consent of the **Authority for Homologation**.*

*Changes in the name of the company, the address and the manufacturing plant as well as one of the parties given the authority to delivery or authorized representative named when the approval was granted is to be immediately disclosed to the **Authority for Homologation**. Breach of this regulation can lead to recall of the approval and moreover can be legally prosecuted.*

The approval expires if it is returned or withdrawn or if the type approved no longer complies with the legal requirements. The revocation can be made if the demanded requirements for issuance and the continuance of the approval no longer exist, if the holder of the approval violates the duties involved in the approval, also to the extent that they result from the assigned conditions to this approval, or if it is determined that the approved type does not comply with the requirements of traffic safety or environmental protection.

*The **Authority for Homologation** may check the proper exercise of the conferred authority taken from this approval at any time. In particular this means the compliant production as well as the measures for conformity of production. For this purpose samples can be taken or have taken. The employees or the representatives of the **Authority for Homologation** may get unhindered access to the production and storage facilities.*

The conferred authority contained with issuance of this approval is not transferable. Trade mark rights of third parties are not affected with this approval.

Instruction on right to appeal

*This approval can be appealed within one month after notification. The appeal is to be filed in writing or as a transcript at the **Authority for Homologation** - Via Consiglio dei Sessanta, 99 - 47891 Dogana - Repubblica di San Marino.*

Inspection Report No.:	ATS-SM-IR-13-23892
of	30/07/2025
Type:	TFR1
Manufacturer:	**TECNOCARAVAN di Damiani Viller srl**

Inspection Report

No. ATS-SM-IR-13-23892

Inspection concerning vehicles / ~~components~~ with regard to:

Uniform provisions concerning the approval of passenger cars with regard to braking

performed according to

ECE Regulation No. 13

as last amended by

11 series of amendments
supplement 18

of the Economic Commission for Europe

Approval status	
	Number of approval
ECE	**E57*13R11/19*0542*00**

0.	**General information**	
0.1.	Make (trade name of manufacturer):	
0.2.	Type:	**TFR1**
0.2.1.	Variant(s):	--
0.3.	Name and address of manufacturer:	**TECNOCARAVAN di Damiani Viller srl** Via Medicine, 1918 41057 S. Vito di Spilamberto – MODENA
0.3.1	Name and address of manufacturer's authorized representative:	Not applicable
0.3.2.	Production plant(s) address(es):	**TECNOCARAVAN di Damiani Viller srl** Via Medicine, 1918 41057 S. Vito di Spilamberto – MODENA
0.4.	No. of the information document:	TFR1-00 Date: 02/07/2025
0.5.	Position of the approval mark:	See information folder
0.6	Vehicle category(ies) (or, if not applicable, vehicle categories which the component(s) is (are) suitable for):	M1

1. Test vehicle

1.1.	Description of the test vehicle:	Commercial name: Transit
1.1.0	Make:	FORD / ADRIA
1.1.1.	Type / Trade Name	TFR1
1.1.2	Variant / Version	--
1.1.3	Place of marking:	See information folder
1.1.4	Main characteristics	
1.1.4.1.	Number of axles:	2
1.1.4.2.	Maximum mass:	3500 kg
1.1.4.3.	Distribution of the maximum mass among the axles:	Axle 1: 2000 kg Axle 2: 2250 kg
1.1.4.4.	Unladen mass:	(#)
1.1.4.5.	Distribution of the unladen mass among the axles:	(#)
1.1.4.6.	Wheelbase:	(#)
1.1.4.7.	Tyres:	(#)
1.1.4.8.	Suspension type:	Coil springs and rigid leaf springs + Air springs “Torpress”.
1.1.4.9.	Axle type:	(#)
1.1.4.10	Brake type:	(#)
1.1.4.11	Brake linings:	(#)
1.1.4.12	Axle test report:	(#)
1.1.4.13	Service braking system	(#)
1.1.4.14	Parking brake system:	(#)
1.1.4.15	Air tank:	Not Applicable
1.1.4.16	EBS:	

1.1.4.17

Make	Family	Configuration	ABS / EBS test report	Stability test report
(#)				

2. Test record

2.1.	Equipment for measuring and testing:	- GPS - Racelogic
2.2	Conformity with the technical sheet and attached drawings:	YES [X] N NO [ ] NA [ ]
2.3	Test track	dry concrete
2.4	Vehicle mass at time of testing	The modifications introduced to by this approval has no negative influences in relation with the tests results specified in the EU type approvals. Type 0 tests and some stability tests were performed. The vehicles continues to satisfy the prescriptions of the R13-11 ECE-UN, supplement 19.

2.4.1

	2 Axle	
	Unladen	Laden
On the axle 1:	(#)	(#)
On the axle 2:	(#)	(#)
On the axles (PR):	(#)	(#)
Mass of the towing vehicle loaded (PM):	(#)	(#)
Mass of the combination (PM+PR)	(#)	(#)

2.5 Tests according Annex 4 - ECE R13-11

2.5.1 Breaking performances

2.5.2. TYPE "0" TESTS WITH ENGINE DISENGAGED

Type of proof	Limit spaces (m) (V: km/h)	Minimum decelerations
Service	0.15*V + V2 /130	5 m/s²
Service at 80% Vmax (2.1.1.)	0.15*V + V2 /103.5	4 m/s²
Relief	0.15*V + 2*V2 /115	2,2 m/s²
Residual efficiency LOADED	0.15*V + 100/30*V2 /115	1,3 m/s²
Residual efficiency LOADED	0.15*V + 100/25*V2 /115	1,1 m/s²
Hot efficiency after type II	0.15*V + 1.33*V2 /115	3,3 m/s²

2.5.2.1 SERVICE BRAKING (point 1.2.2.)

VEHICLE	SPEED (km/h)	EFFICIENCY (m)		STRENGTH ON COMMAND (N)	MEDIUM DECELERATION (m/s²)
		ACTUAL	REQUEST		
Laden	(#)	S1 = (#)	So = (#)	(#) < 700	(#) > 5
Unladen	(#)	S1 = (#)	So = (#)	(#) < 700	(#) > 5

2.5.2.2 RESCUE BRAKING - RESIDUAL EFFICIENCY SERVICE BRAKE SECTIONS (point 2.1.2.)

Axes braking	Vehicle	SPEED (km/h)	EFFICIENCY (m)		STRENGTH ON COMMAND (N)	MEDIUM DECELERATION (m/s²)
			ACTUAL	REQUEST		
1° asse	Laden	(#)	(#)	(#)	(#) < 700	(#) > 2,2
	Unladen	(#)	(#)	(#)	(#) < 700	(#) > 2,2
2° asse	Laden	(#)	(#)	(#)	(#) < 700	(#) > 2,2
	Unladen	(#)	(#)	(#)	(#) < 700	(#) > 2,2
Staz.	Laden	(#)	(#)	(#)	(#) < 700	(#) > 1,3
1°, 2°, 3°	Unladen	(#)	(#)	(#)	(#) < 700	(#) > 1,3

2.5.2.3 REDUCED PRESSURE BRAKING (bar) (points 10.3.3., 10.3.8., 10.3.9.)

Vehicle	SPEED (km/h)	EFFICIENCY (m)		STRENGTH ON COMMAND (N)	MEDIUM DECELERATION (m/s^2)
		ACTUAL	REQUEST		
Laden	(#)	(#)	(#)	(#) < 700	(#) > 2,2
Unladen	(#)	(#)	(#)	(#) < 700	(#) > 2,2

2.5.3. TYPE "0" TESTS WITH ENGINE ENGAGED

2.5.3.1 SERVICE BRAKING (point 1.2.2.)

Vehicle	SPEED (km/h)	EFFICIENCY (m)		STRENGTH ON COMMAND (N)	MEDIUM DECELERATION (m/s^2)
		ACTUAL	REQUEST		
Laden	60	25.4	36.7	350 < 700	6.8 > 5
Unladen	60	15.9	36,7	300 < 700	8.7 > 5

2.5.3.2 RESCUE BRAKING - RESIDUAL EFFICIENCY SERVICE BRAKE SECTIONS (point 2.1.2.)

Axes braking	Vehicle	SPEED (km/h)	EFFICIENCY (m)		STRENGTH ON COMMAND (N)	MEDIUM DECELERATION (m/s^2)
			ACTUAL	REQUEST		
1° asse	Laden	(#)	(#)	(#)	(#) < 700	(#) > 2,2
	Unladen	(#)	(#)	(#)	(#) < 700	(#) > 2,2
2° asse	Laden	(#)	(#)	(#)	(#) < 700	(#) > 2,2
	Unladen	(#)	(#)	(#)	(#) < 700	(#) > 2,2

2.5.3.3 Emergency braking - Complementary tests

Axes braking	Vehicle	SPEED (km/h)	EFFICIENCY (m)		STRENGTH ON COMMAND (N)	MEDIUM DECELERATION (m/s^2)
			ACTUAL	REQUEST		
1° asse	Laden	(#)	(#)	(#)	(#) < 700	(#) > 2,2
	Unladen	(#)	(#)	(#)	(#) < 700	(#) > 2,2
2° asse	Laden	(#)	(#)	(#)	(#) < 700	(#) > 2,2
	Unladen	(#)	(#)	(#)	(#) < 700	(#) > 2,2
Staz.	Laden	(#)	(#)	(#)	(#) < 700	(#) > 1,3
1°, 2°, 3°	Unladen	(#)	(#)	(#)	(#) < 700	(#) > 1,3

2.5.3.4 REDUCED PRESSURE BRAKING (bar) (points 10.3.3., 10.3.8., 10.3.9.)

Vehicle	SPEED (km/h)	EFFICIENCY (m)		STRENGTH ON COMMAND (N)	MEDIUM DECELERATION (m/s^2)
		ACTUAL	REQUEST		
Laden	(#)	(#)	(#)	(#) < 700	(#) > 2.2
Unladen	(#)	(#)	(#)	(#) < 700	(#) > 2.2

2.5.4. TYPE "I" TESTS WITH REPEATED BRAKING (point 1.3.)
(15 braking times from 0.8 Vmax and 0.4 Vmax and deceleration 3 m / s^2; interval 55 s)

2.5.4.1. SERVICE BRAKING AFTER HEATING (point 1.3.3.)

VEHICLE LADEN	SPEED (km/h)	EFFICIENCY (m) ACTUAL	EFFICIENCY (m) REQUEST	STRENGTH ON COMMAND (N)	MEDIUM DECELERATION (m/s^2)
1st test	(#) (#)	(#)	$S_1/.6$ = (#) $S_0/.8$ = (#)	(#) < 700	(#) > 4
Possible further evidence (1)	(#) (#)	(#) (#)	$S_1/.6$= (#) $S_0/.8$= (#)	(#) < 700	(#) >4

(1): if the condition S1 * 0.6 but not S0 * 0.8 is respected

Temperatures after the test:
1st axis: (#) °C;
2nd axis: (#) °C;

2.5.5. TYPE "II" TEST (point 1.4.)

2.5.5.1 On a gradient of 6%, the vehicle maintains a speed of 30 ± 5 km / h, while in gear: with only the intervention of the engine brake Equivalent test in plane: mean deceleration detected [m / s2 (> 0.6 m / s2)] (#)

2.5.6. TYPE "II BIS" TEST (point 1.5.)

2.5.6.1. On a 7% gradient, the vehicle maintains a speed of 30 ± 5 km / h, while in gear: with only the intervention of the engine brake Equivalent test in plane: mean deceleration detected [m / s2 (> 0.6 m / s2)] (#)

2.5.7. TYPE "III" TEST (trailers)

BRAKING DEVICE USED IN TYPE II TESTS:

POSSIBLE HOT EFFICIENCY TEST - SERVICE BRAKING - TYPE 0

VEHICLE	SPEED (km/h)	EFFICIENCY (m)		STRENGTH ON COMMAND (N)	MEDIUM DECELERATION (m/s^2)
		ACTUAL	REQUEST		
Laden	(#)	S1 = (#)	So = (#)	(#) < 700	(#) > 3,3

2.5.7.1. Check brake wear after cooling: Not Applicable

2.5.8. RESPONSE TIMES AND DIMENSIONS OF FLEXIBLE PIPES

2.5.8.1. To The Operating Elements: (#)

2.5.8.2. At The Joint Of The Trailer: (#)

2.5.8.3. Flexible Truck Pipes For Semi-Trailers:

Lenght:	N/A	m
Internal diameter:	N/A	mm

EMPTYING TEST OF THE AUTOMATIC PIPE (Time To Reach 1.5 Bar By Operating Fully):

the service brake:	N/A	(< 2 s)
the emergency brake:	N/A	(< 2 s)
the parking brake:	N/A	(< 2 s)

2.5.8.4. Cases Where Type I And / Or Type II / II Bis Tests Should Not Be Carried Out: Not applicable

2.5.9. TANKS AND ENERGY SOURCES THAT USE COMPRESSED AIR: Not Applicable

2.5.10. SPRING BRAKES Not Applicable

2.5.11. PARKING BRAKES WITH MECHANICAL LOCKING OF THE BRAKE PISTONS (SNAP BRAKES): (#)

2.5.12. TRACTOR - TRAILER VEHICLE COMPATIBILITY (#)

2.5.12.1 Braking rate of the motor vehicle as a function of the moderate pressure at the coupling (Annex II - Appendix to point 1.1.4.2. - Diagram 2) (#)

2.6	Tests according Annex 13 - ECE R13-11	
2.6.1.	ENERGY CONSUMPTION (point 5.1. Of Annex X)	
2.6.1.1.	Brake reservoirs at the pressure specified by the manufacturer, is equal to [bar]:	Not applicable
2.6.1.2.	Isolated auxiliary service tanks and liter capacity at the "moderate" joint:	Not applicable
2.6.1.3.	Full braking of the vehicle LOADED; with initial speed of: (> / = 50 km / h);	NR km/h
2.6.1.4.	surface with an adhesion coefficient of: (</= 0,3);	(#)
2.6.1.5.	braking duration [s]: (>/= 15 s; >/= Vmax/7 = 12,9 s)	(#)
2.6.1.6.	with all wheels under control of the anti-lock device test performed in 1 phase, without intermediate re-feeding At the end of the test, the engine was stopped	
2.6.1.7.	The pressure in the brake reservoirs has dropped to:	Not Applicable
2.6.1.8.	Four full braking operations were then carried out with the vehicle stationary, with the engine off	
2.6.1.9.	the "moderate" joint pressure at 1st braking was:	Not Applicable
2.6.1.10.	The pressure in the brake reservoirs has dropped to:	Not Applicable
2.6.1.110	The brake tanks were then isolated with special taps, in order to interrupt the power supply. A 5th test was then performed with full braking, on high grip, obtaining the results in the table:	

VEHICLE	SPEED OF TEST (km/h)	EFFICIENCY (0.15*V+2V²/115)		STRENGTH ON COMMAND N (</= 70)	DECELERATION (m/s²)
		Measured (m)	Regulatory (m)		
laden	--	--	--	-- < 200	--

2.6.1.12.	The pressure at the joint at the 5th braking was [bar]: (>/=Pm/2 = 3 bar).	Not applicable		
2.6.2.	USE OF ADHERENCE (point 5.2 of Annex X)			
2.6.2.1.	Maximum grip of the road surface: was measured with the vehicle in question, with the engine switched off, with:	(#)		
2.6.2.2.	Maximum adhesion used: was determined by applying maximum force to the brake pedal, with:	(#)		
2.6.2.3.	With loaded vehicle: (see point 7)	K1 = (#) K2 = (#)		
2.6.2.4.	When the vehicle is empty: (see point 8)	K1 = (#) K2 = (#)		
	Allowed limits:	K1>/= 0.5;	K2</= 0.3;	K1/K2 >/= 2
2.6.3.	COMPLEMENTARY LOADED AND EMPTY TESTS (Point 5.3 of Annex X).			
2.6.3.1.	QUICK APPLICATION of the maximum force on the brake control:			
2.6.3.1.1	on high and low grip, with an initial speed of 40 e [km / h], the directly controlled wheels did not lock.	(#)		
2.6.3.1.2	ENTRY FROM HIGH TO LOW GRIP at speeds of 50 and [km / h]	(#)		
2.6.3.1.3	with fully active ABS and maximum force on the brake lever: the directly controlled wheels did not lock.	(#)		
2.6.3.1.4	EXIT FROM LOW TO HIGH GRIP at an initial speed of	(#)		
2.6.3.1.5	there were no deviations. with fully active ABS and maximum force on the brake lever:	(#)		
2.6.3.1.6	the deceleration has reached the value corresponding to the high grip within: charged to: empty:	(#) (#)		

2.6.3.1.7 DIFFERENTIATED GRIP ON BOTH SIDES of the vehicle, at initial speed 50 km / h, with fully active ABS and maximum force on the brake control: the directly controlled wheels did not lock.

In the tests referred to in 5.3.4, the braking rate was calculated on the basis of the deceleration time t from 40 to 20 km / h, as in 5.2.2.

CONDITION	LOADED VEHICLE			EMPTY VEHICLE		
TEST N.	1^	2^	3^	1^	2^	3^
t (s)	(#)	(#)	(#)	(#)	(#)	(#)
z = 0,849 / tm	(#)			(#)		
AVERAGE VALUES	z' = (z1 + z2 + z3) / 3 = 0,20			z' = (z1 + z2 + z3) / 3 = 0,27		
LIMITS	z' >/= 0,75 (4K2 + K1) / 5 = 0,17			z' >/= 0,75 (4K2 + K1) / 5 = 0,186		
ALLOWED	z' >/= K2 = 0.11			z' >/= K2 = 0.13 (+)		

(+) with empty vehicle, limits not prescribed.

In the tests referred to in points 5.3.4 and 5.3.5, the following occurred:
short periods of directly controlled wheel locking;

sometimes total locking at speeds of: (#) (</= 15 km/h)

In the tests referred to in points 5.3.4 and 5.3.5 it was necessary to correct the steering.
The maximum angle of rotation of the steering wheel was:
(</ = 120 ° in the first 2 seconds; </ = 240 ° overall).

at load: (#)
empty: (#)

No external part of the tires crossed the dividing line between the two surfaces with different grip.

2.6.4. CHECK OF RESIDUAL EFFICIENCY IN CASE OF ABS SYSTEM FAILURE

Vehicle	Speed (km/h)	EFFICIENCY (m)		STRENGTH ON COMMAND (N)	MEDIUM DECELERATION (m/s^2)
		ACTUAL	REQUEST		
Laden	(#)	S1 = (#)	So = (#)	(#) < 700	(#) > 1,3
Unladen	(#)	S1 = (#)	So = (#)	(#) < 700	(#) > 1,1

2.7. CHECKS

2.7.1. VERIFICATION OF THE FUNCTIONING OF THE LIGHTS (point 4.2 of Annex X)

The prescribed optical warning light comes on when the ignition key is inserted and goes out at the speed of: (#)

2.7.2. INFLUENCE OF MAGNETIC OR ELECTRIC FIELDS ON ABS OPERATION (point 4.5 of Annex X)

See the manufacturer's declaration attached to this report (not for converted vehicles:
- the ABS system is not affected by the transformation). Electronic devices fitted are approved according to ECE Regulation No. 10

2.8. DETERMINATION OF THE AVAILABLE ADHERENCE AND OF THAT USED BY LOAD

2.8.1. Characteristics of the vehicle under test and data for the calculation: Wheelbase(s): (#)

2.8.2. Test conditions: vehicle **LOAD** on surface with grip: **HIGH / LOW**

2.8.3. Vehicle mass: (#)

2.8.4. Static ground mass on the axles: Axle 1= (#)
Axle 2= (#)

2.8.5. Center of gravity height from the ground: h =(#)

2.8.6. Virtual step: E =(#)

2.8.7. Slowing down time from 40 to 20 km / h using maximum grip

WITHOUT ABS	Adherence:	HIGH			LOW		
Formulas used:	Braked axis:	1°			1°		
zm = 0,566 / t	Test:	1^	2^	3^	1^	2^	3^
T1 = zm*P - 0.015 P2	t (s)	(#)	(#)	(#)	(#)	(#)	(#)
T2 = zm*P-0.01 P1 (daN)							
	Tm	(#)			(#)		
P1din = P1 + P*zm*h/E (daN)	(*1,05)	(#)			(#)		
P2din = P2 – P*zm*h/E	t	Minimo: (#)			Minimo: (#)		
	zm	(#)			(#)		
K1 = T1 / P1din;	T1	(#)			(#)		
K2 = T2 / P2din;	P1 dn	(#)			(#)		
	K1	(#)			(#)		

2.8.8. Slowing down time from 40 to 20 km / h using maximum grip

WITHOUT ABS	Adherence:	HIGH			LOW		
Formulas used:	Braked axis:	2°			2°		
zm = 0,566 / t	Test:	1^	2^	3^	1^	2^	3^
T1 = zm*P - 0.015 P2	t (s)	(#)	(#)	(#)	(#)	(#)	(#)
T2 = zm*P-0.01 P1 (daN)							
	Tm	(#)			(#)		
P1din = P1 + P*zm*h/E (daN)	(*1,05)	(#)			(#)		
P2din = P2 – P*zm*h/E	t	Minimo: (#)			Minimo: (#)		
	zm	(#)			(#)		
K1 = T1 / P1din;	T1	(#)			(#)		
K2 = T2 / P2din;	P1 dn	(#)			(#)		
	K1	(#)			(#)		

WITH ABS	Adherence:	HIGH			LOW		
Formulas used:	Braked axis:	All			All		
	Test:	1^	2^	3^	1^	2^	3^
Zal = 0.849 / t	t (s)	(#)	(#)	(#)	(#)	(#)	(#)
	t min	(#)			(#)		
	(*1,05)	(#)			(#)		
	t	Minimo: (#)			Minimo: (#)		
	Zal	(#)			(#)		

2.8.9. Dynamically weighted coefficient of adhesion:

	High adhesion	Low adhesion
F1dyn = P1 + h/E.Zal.P = (daN)	(#)	(#)
F2dyn = P2 – h/E.Zal.P = (daN)	(#)	(#)
Km = (K1.F1dyn + K2.F2dyn) / P =	kma: (#)	kmb: (#)

Aderenza utilizzata: e = K/X (e >/= 0,75)	(#)	(#)

2.9. DETERMINATION OF THE AVAILABLE ADHESION AND OF THAT USED EMPTY

2.9.1. Characteristics of the vehicle under test and data for the calculation: Wheelbase(s): (#)

2.9.2. Test conditions: **VACUUM** vehicle on surface with grip: **HIGH LOW**

2.9.3. Vehicle mass: (#)

2.9.4. Static ground mass on the axles: Axle 1= (#)
Axle 2= (#)

2.9.5. Center of gravity height from the ground: h = (#)

2.9.6. Virtual wheelbase: E = (#)

2.9.7. Slowing down time from 40 to 20 km / h using maximum grip

WITHOUT ABS		Adherence:	HIGH			LOW		
Formulas used:		Braked axis:	1°			1°		
zm = 0,566 / t		Test:	1^	2^	3^	1^	2^	3^
T1 = zm*P - 0.015 P2		t (s)	(#)	(#)	(#)	(#)	(#)	(#)
T2 = zm*P-0.01 P1	(daN)	Tm	(#)			(#)		
		(*1,05)	(#)			(#)		
P1din = P1 + P*zm*h/E	(daN)	t	Minimo: (#)			Minimo: (#)		
P2din = P2 – P*zm*h/E		zm	(#)			(#)		
		T1	(#)			(#)		
K1 = T1 / P1din;		P1 dn	(#)			(#)		
K2 = T2 / P2din;		K1	(#)			(#)		

WITHOUT ABS		Adherence:	HIGH			LOW		
Formulas used:		Braked axis:	2°			2°		
zm = 0,566 / t		Test:	1^	2^	3^	1^	2^	3^
T1 = zm*P - 0.015 P2		t (s)	(#)	(#)	(#)	(#)	(#)	(#)
T2 = zm*P-0.01 P1	(daN)	Tm	(#)			(#)		
		(*1,05)	(#)			(#)		
P1din = P1 + P*zm*h/E	(daN)	t	Minimo: (#)			Minimo: (#)		
P2din = P2 – P*zm*h/E		zm	(#)			(#)		
		T1	(#)			(#)		
K1 = T1 / P1din;		P1 dn	(#)			(#)		
K2 = T2 / P2din;		K1	(#)			(#)		

2.9.8. Slowing down time from 40 to 20 km/h using maximum grip

WITH ABS		Adherence:	HIGH			LOW		
Formulas used:		Braked axis:	All			All		
		Test:	1^	2^	3^	1^	2^	3^
		t (s)	(#)	(#)	(#)	(#)	(#)	(#)
		t min	(#)			(#)		
		(*1,05)	(#)			(#)		
		t	Minimo (#)			Minimo (#)		
Zal = 0.849 / t		Zal	(#)			(#)		

2.9.9. Dynamically weighted coefficient of adhesion:

		High adhesion	Low adhesion
F1dyn = P1 + h/E.Zal.P =	(daN)	(#)	(#)
F2dyn = P2 – h/E.Zal.P =	(daN)	(#)	(#)
Km = (K1.F1dyn + K2.F2dyn) / P =		kma (#)	kmb (#)

Aderenza utilizzata: e = K/X (e >/= 0,75)	(#)	(#)

5 Other information

Place of testing: Via Medicine, 1918
41057 San Vito di Spilamberto MO

Date of testing: 30/07/2025

Technical service representative(s):	**Senior Inspector**	**Junior Inspector (if applicable)**
	ing. Thomas Zivelonghi	N/A

Manufacturer's representative: N/A

Remarks:

(#) The modifications introduced to by this application has no negative influences in relation with the tests results specified in approval of I phase vehicle No.:

Type	Type approval	Vehicle Type
250	e3*2007/46*0049	Fiat Ducato
250	e3*2007/46*0044	Fiat Ducato
Y	e3*2007/46*0051	Citroen Jumper
Y	e3*2007/46*0046	Citroen Jumper
SYN2E	e1*2007/46*1627*	MAN TGE
SYN1E	e1*2007/46*1626*	MAN TGE
SYN1E	e1*2007/46*1613*	Volkswagen Crafter
SYN2E	e1*2007/46*1613*	Volkswagen Crafter
FCD	e1*2007/46*1100*	Ford Transit
FDD	e1*2007/46*1098*	Ford Transit

Type 0 tests and some stability tests were performed.

The vehicles continues to satisfy the prescriptions of the R13-11 ECE-UN, supplement 18.

5.1 Appendix

1. List of modifications — Appendix 1
2. Test Photo (s) — Appendix 2

5.2 Enclosures

Information Folder	No. 000/EIFR1-00 Date:21/10/2022

6. Statement of conformity

The information document as given in paragraph 0.4 and the type described there are in compliance with the test specification mentioned above.

With regard to the required level of performance to be achieved, the tested items were representative for the type to be approved (see paragraph 1).

The tests were carried out in accordance with the relevant requirements of EN ISO/IEC 17025 and EN ISO/IEC 17020 / R13-11 ECE/UN.

The test report comprises pages 1 to 20.

Il shall not be reproduced except in full, without written approval of the laboratory.

Dogana, Repubblica di San Marino, 30/07/2025

Number of project and protocol	***Originality Check*** (*) **ATS-SM-PR-05018**	**Automotive Technical Service S.r.l.** ***Inspector*** (ing. Matteo Zivelonghi) **Automotive Technical Service S.r.l.** ***Deputy Technical Director*** (ing. Bogdan Nicolae Domnescu)	AUTOMOTIVE TECHNICAL SERVICE S.r.l. ATS RSMAO-01 Via Consiglio dei Sessanta, 99 - 47891 - RSM

(*) To check the originality of documents, scan the QR Code or connect to the site https://www.ats.sm/originality-control-atp-adr-tyapp/ and follow the instruction in it.

Appendix 1

List of modifications **~~Applicable~~ / Not Applicable** **Appendix 1**

More details for application of **Date :**

Correction of : -

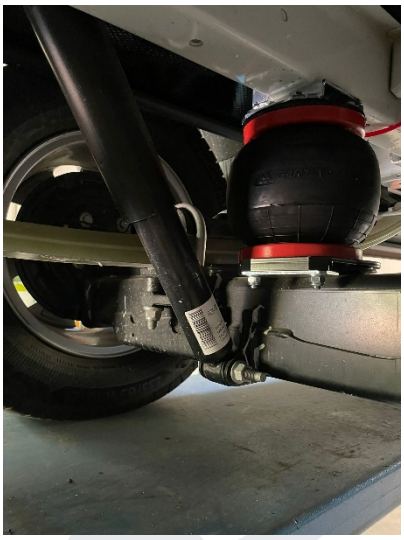
Modification of : -

Addition of : -

Deletion of : -

Appendix 2

Test Photo(s) **Appendix 2**



FASCICOLO INFORMATIVO

Information package

Rev.00

Costruttore del veicolo completato / *The manufacturer of the completed vehicle*:	**TECNOCARAVAN di Damiani Viller srl** Via Medicine, 1918 41057 S. Vito di Spilamberto - MODENA
Tipo / *Type*:	TFR1
Categoria / *Category*:	M1
Varianti / *Variant*:	Vedere scheda informativa *See information document*
Versioni / *Version*:	Vedere scheda informativa *See information document*
Lista delle modifiche introdotte dalla presente estensione / List of changes introduced by this extension:	N/A

ELENCO COMPLETO DELLE INFORMAZIONI DA FORNIRE PER L'OMOLOGAZIONE CE DEI VEICOLI, DEI COMPONENTI O DELLE ENTITÀ TECNICHE INDIPENDENTI [a]

COMPLETE LIST OF INFORMATION FOR THE PURPOSE OF EC TYPE-APPROVAL OF VEHICLES, COMPONENTS OR SEPARATE TECHNICAL UNITS [a]

AI SENSI DEL REGOLAMENTO (UE) N. 2018/858, MODIFICATA DA ULTIMO DAL REGOLAMENTO (UE) N. 2020/683

WITH REGARD TO REGULATION (EU) NO.2018/858 AS LAST AMENDED BY REGULATION (EU) NO. 2020/683

0.	**DATI GENERALI** ***GENERAL***	
0.1.	Marca (denominazione commerciale del costruttore): *Make (trade name of manufacturer):*	TECNOCARAVAN
0.2.	Tipo: *Type:*	TFR1
0.2.1.	Eventuale/i designazione/i commerciale/i: *Commercial name(s) (if available):*	FORD / ADRIA (e1*2007/46*1100 e/*and* e1*2007/46*1098) o/*or* MAN / ADRIA (e1*2007/46*1627 e/*and* e1*2007/46*1626) o/*or* VOLKSWAGEN / ADRIA (e1*2007/46*1613) o/*or* FIAT / ADRIA (e3*2007/46*0049 e/*and* e3*2007/46*0044) o/*or* CITROEN / ADRIA (e3*2007/46*0051 e/*and* e3*2007/46*0046)
0.3.	Mezzi di identificazione del tipo, se marcati sul veicolo/sul componente/sull'entità tecnica indipendente [1] [b]: *Means of identification of type, if marked on the vehicle/component/separate technical unit [1] [b]:*	su targhetta riassuntiva *on the manufacturer plate*
0.3.1.	Posizione della marcatura: *Location of that marking:*	targhetta del costruttore sistemata sulla traversa calandra *manufacturer's plate located on the cross member on the front radiator grill*
0.4.	Categoria del veicolo [c]: *Category of vehicle [c]:*	Categoria / *Category*: M1
0.5.	Nome della società e indirizzo del costruttore: *Company name and address of manufacturer:*	**TECNOCARAVAN di Damiani Viller srl** Via Medicine, 1918 41057 S. Vito di Spilamberto - MODENA
0.8.	Denominazione/i e indirizzo/i dello/gli stabilimento/i di montaggio: *Name(s) and address(es) of assembly plant(s):*	**TECNOCARAVAN di Damiani Viller srl** Via Medicine, 1918 41057 S. Vito di Spilamberto - MODENA
0.9.	Denominazione e indirizzo dell'(eventuale) rappresentante del costruttore: *Name and address of the manufacturer's representative (if any):*	Non ricorre *Not applicable*

1.	**CARATTERISTICHE COSTRUTTIVE GENERALI** ***GENERAL CONSTRUCTION CHARACTERISTICS***	
1.1.	Fotografie e/o disegni di un veicolo/un componente/un'entità tecnica indipendente rappresentativi [1]: *Photographs and/or drawings of a representative vehicle/component/separate technical unit [1]:*	Vedere allegato 1.1-001/TFR1-00 *See annex*
1.3.	Numero di assi e di ruote: *Number of axles and wheels:*	2 assi */ axles* 4 ruote */ wheels*
1.3.1.	Numero e posizione degli assi a ruote gemellate: *Number and position of axles with twin wheels:*	Non ricorre *Not applicable*
1.3.2.	Numero e posizione degli assi sterzanti: *Number and position of steered axles:*	1; anteriore/*front*
1.3.3.	Assi motore (numero, posizione, interconnessione): *Powered axles (number, position, interconnection):*	

Numero *Number*	Posizione *Position*	Interconnessione *Interconnection*
1	Asse/axle 2	Not applicable

1.8.	Lato di guida: [1] *Hand of drive: [1].*	a destra / a sinistra *left / right*

2. **MASSE E DIMENSIONI**
MASSES AND DIMENSIONS
(in kg e mm) (eventualmente con riferimento ai disegni)
(in kg and mm) (Refer to drawing where applicable)

2.1.	**Passo o passi(a pieno carico):** ***Wheelbase(s) (fully loaded):***	
2.1.1.	Veicoli a due assi *Two-axle vehicles:*	Vedere Omologazione Europea 1° fase/ *See European Technical Approval 1st phase*
2.3.1.	Carreggiata di ciascun asse sterzante: *Track of each steered axle:*	Vedere Omologazione Europea 1° fase/ *See European Technical Approval 1st phase*
2.6.	**Massa in ordine di marcia** ***Mass in running order*** a) massima e minima per ogni variante: *(a) minimum and maximum for each variant:* b) massa di ciascuna versione (deve essere fornita una matrice): *(b) mass of each version (a matrix must be provided):*	Vedere Omologazione Europea 1° fase/ *See European Technical Approval 1st phase*
2.6.1.	Distribuzione di tale massa sugli assi e, nel caso di un semirimorchio, di un rimorchio ad asse centrale o di un rimorchio a timone rigido, massa gravante sul punto di aggancio: *Distribution of this mass among the axles and, in the case of a semi-trailer, a rigid drawbar trailer or a centre-axle trailer, the mass on the coupling:* a) massima e minima per ogni variante: *(a) minimum and maximum for each variant:* b) massa di ciascuna versione (deve essere fornita una matrice): *(b) mass of each version (a matrix must be provided):*	Vedere Omologazione Europea 1° fase/ *See European Technical Approval 1st phase*
2.7.	Massa minima del veicolo completo dichiarata dal costruttore, nel caso di un veicolo incompleto: *Minimum mass of the completed vehicle as stated by the manufacturer, in the case of an incomplete vehicle:*	Non ricorre *Not applicable*
2.8.	Massa massima a pieno carico tecnicamente ammissibile dichiarata dal costruttore : *Technically permissible maximum laden mass stated by the manufacturer :*	3500 – 4500 kg

2.8.1.	Distribuzione di tale massa tra gli assi e, per semirimorchi o rimorchi ad asse centrale, carico gravante sul punto di traino [3]: *Distribution of this mass among the axles and, in the case of a semi-trailer or centre-axle trailer, load on the coupling point [3]:*	Vedere Omologazione Europea 1° fase/ *See European Technical Approval 1st phase*
2.9.	Massa massima tecnicamente ammissibile su ciascun asse: *Technically permissible maximum mass on each axle:*	Vedere Omologazione Europea 1° fase/ *See European Technical Approval 1st phase*
2.11.	Massa massima rimorchiabile tecnicamente ammissibile del veicolo trainante: *Technically permissible maximum towable mass of the towing vehicle*	Non ricorre *Not applicable*
2.11.1.	Rimorchio a timone: *Drawbar trailer:*	Non ricorre *Not applicable*
2.11.2.	Semirimorchio: *Semi-trailer:*	Non ricorre *Not applicable*
2.11.3.	Rimorchio ad asse centrale: *Centre-axle trailer:*	3500 kg
2.11.4.	Rimorchio a timone rigido: *Rigid drawbar trailer:*	Non ricorre *Not applicable*
2.11.6.	Massa massima del rimorchio non frenato: *Maximum mass of unbraked trailer:*	750 kg
2.12.	Massa massima tecnicamente ammissibile sul punto di aggancio: *Technically permissible maximum mass at the coupling point:*	Non ricorre *Not applicable*
2.12.1.	di un veicolo trainante: *Of a towing vehicle:*	225 kg

3.	**CONVERTITORE DELL'ENERGIA DI PROPULSIONE**[k] ***PROPULSION ENERGY CONVERTER***[k]	
3.1.	Costruttore del convertitore o dei convertitori dell'energia di propulsione: *Manufacturer of the propulsion energy converter(s):*	Vedere Omologazione Europea 1° fase/ *See European Technical Approval 1st phase*
3.1.1.	Codice del costruttore (apposto sul convertitore dell'energia di propulsione, o altri mezzi di identificazione): *Manufacturer's code (as marked on the propulsion energy converter or other means of identification):*	Vedere Omologazione Europea 1° fase/ *See European Technical Approval 1st phase*
3.1.2.	Eventuale numero di omologazione comprendente il marchio di identificazione del carburante *Approval number (if appropriate) including fuel identification marking:*	Vedere Omologazione Europea 1° fase/ *See European Technical Approval 1st phase*
	(solo per veicoli pesanti): *(heavy-duty vehicles only):*	Vedere Omologazione Europea 1° fase/ *See European Technical Approval 1st phase*
3.2.	Motore a combustione interna *Internal combustion engine*	
3.2.1.1.	Principio di funzionamento: [1] *Working principle:* [1]	Accensione spontanea *(Compression ignition)*
	Ciclo: [1] *Cycle:* [1]	4 tempi *4 stroke*
3.3.	Macchina elettrica *Electric machine*	
3.3.1.	Tipo (avvolgimento, eccitazione): *Type (winding, excitation):*	Non ricorre *Not applicable*
3.3.1.1.	Potenza oraria massima: kW *Maximum hourly output: kW*	Non ricorre *Not applicable*
3.3.1.2.	Tensione di esercizio: V *Operating voltage: V*	Non ricorre *Not applicable*
3.3.2.	REESS *REESS*	Non ricorre *Not applicable*
3.3.2.4.	Ubicazione: *Position:*	Non ricorre *Not applicable*
3.4.	Combinazioni di convertitori dell'energia di propulsione *Combinations of propulsion energy converters*	Non ricorre *Not applicable*

4. **TRASMISSIONE** (p)
TRANSMISSION (p)

4.2. Tipo (meccanica, idraulica, elettrica, ecc.):
Type (mechanical, hydraulic, electric, etc.):

Cambio *Gearbox*	Trasmissione *Transmission*
automatico / *automatic*	Idraulica / *hydraulic*
manuale / *manual*	meccanica/ *mechanical*

4.5 **Cambio**
Gearbox

4.5.1. Tipo (1)
Type (1)
Vedi punto 4.2
See point 4.2

4.6. **Rapporti di trasmissione**
Gear ratios
Vedere Omologazione Europea 1° fase/
See European Technical Approval 1st phase

4.7. Velocità massima di progetto del veicolo (in km/h) (q):
Maximum vehicle design speed (in km/h) (q):
Vedere Omologazione Europea 1° fase/
See European Technical Approval 1st phase

5.	**ASSI** ***AXLES***	
5.1.	Descrizione di ciascun asse: *Description of each axle:*	Vedere Omologazione Europea 1° fase/ *See European Technical Approval 1st phase*
5.2.	Marca: *Make:*	Vedere Omologazione Europea 1° fase/ *See European Technical Approval 1st phase*
5.3.	Tipo: *Type:*	Vedere Omologazione Europea 1° fase/ *See European Technical Approval 1st phase*
5.4.	Posizione dello/gli asse/i sollevabile/i: *Position of retractable axle(s):*	Non ricorre *Not applicable*
5.5.	Posizione dello/gli asse/i scaricabile/i: *Position of loadable axle(s):*	Non ricorre *Not applicable*

6.	**ORGANI DI SOSPENSIONE** ***SUSPENSION***	
6.1	Disegni delle disposizioni di sospensione: *Drawings of the suspension arrangements:*	Vedere Omologazione Europea 1° fase/ *See European Technical Approval 1st phase*
6.2.	Tipo e modello della sospensione di ciascun asse, gruppo di assi o ruota: *Type and design of the suspension of each axle or group of axles or wheel:*	Vedere Omologazione Europea 1° fase/ *See European Technical Approval 1st phase* + Molle ad aria sul secondo asse *Air spring on second axle* Vedere allegato 6.0-001/TFR1-00 *See annex*
6.2.1.	Regolazione del livello: (1) *Level adjustment: (1)*	sì/~~no~~/~~facoltativo~~ *yes/~~no~~/~~optional~~*
6.2.3.	Sospensione pneumatica dello/gli asse/i motore/i: (1) *Air-suspension for driving axle(s): (1)*	sì/~~no~~ *yes/~~no~~*
6.2.3.1	Sospensione del o degli assi motore/i equivalente alla sospensione pneumatica: (1) *Suspension of driving axle(s) equivalent to air-suspension: (1)*	sì/~~no~~ *yes/~~no~~*
6.2.4	Sospensione pneumatica dello/gli asse/i non motore/i: (1) *Air-suspension for non-driving axle(s): (1)*	~~sì~~/no *~~yes~~/no*
6.2.4.1	Sospensione dello/gli asse/i non motore/i equivalente alla sospensione pneumatica: (1) *Suspension of non-driving axle(s) equivalent to air-suspension: (1)*	~~sì~~/no *~~yes~~/no*

6.6	**Ruote e pneumatici** ***Tyres and wheels***	
6.6.1.	Combinazione/i ruote/pneumatici *Tyre/wheel combination(s)*	Vedere Omologazione Europea 1° fase/ *See European Technical Approval 1st phase*
6.6.1.1.	Assi *Axles*	Vedere punto 6.6.1 *See point*
6.6.1.1.1	Asse 1: *Axle 1:*	Vedere punto 6.6.1 *See point*
6.6.1.1.2	Asse 2: *Axle 2:*	Vedere punto 6.6.1 *See point*
6.6.2.	Ruota di scorta (se presente): *Spare wheel, if any:*	Vedere Omologazione Europea 1° fase/ *See European Technical Approval 1st phase*
6.6.2.1.	Limiti superiore e inferiore dei raggi di rotolamento *Upper and lower limits of rolling radii*	Vedere punto 6.6.1 *See point*
6.6.2.2.	Asse 1: *Axle 1:*	Vedere punto 6.6.1 *See point*
6.6.4.	Combinazione dispositivo di trazione sulla neve/pneumatico/ruota sull'asse anteriore e/o posteriore adatta al tipo di veicolo, quale raccomandata dal costruttore: *Chain/tyre/wheel combination on the front and/or rear axle that is suitable for the type of vehicle, as recommended by the manufacturer:*	Le catene possono essere usate sui seguenti pneumatici: *Chain can be used on the following tyre/rim combination(s)*:

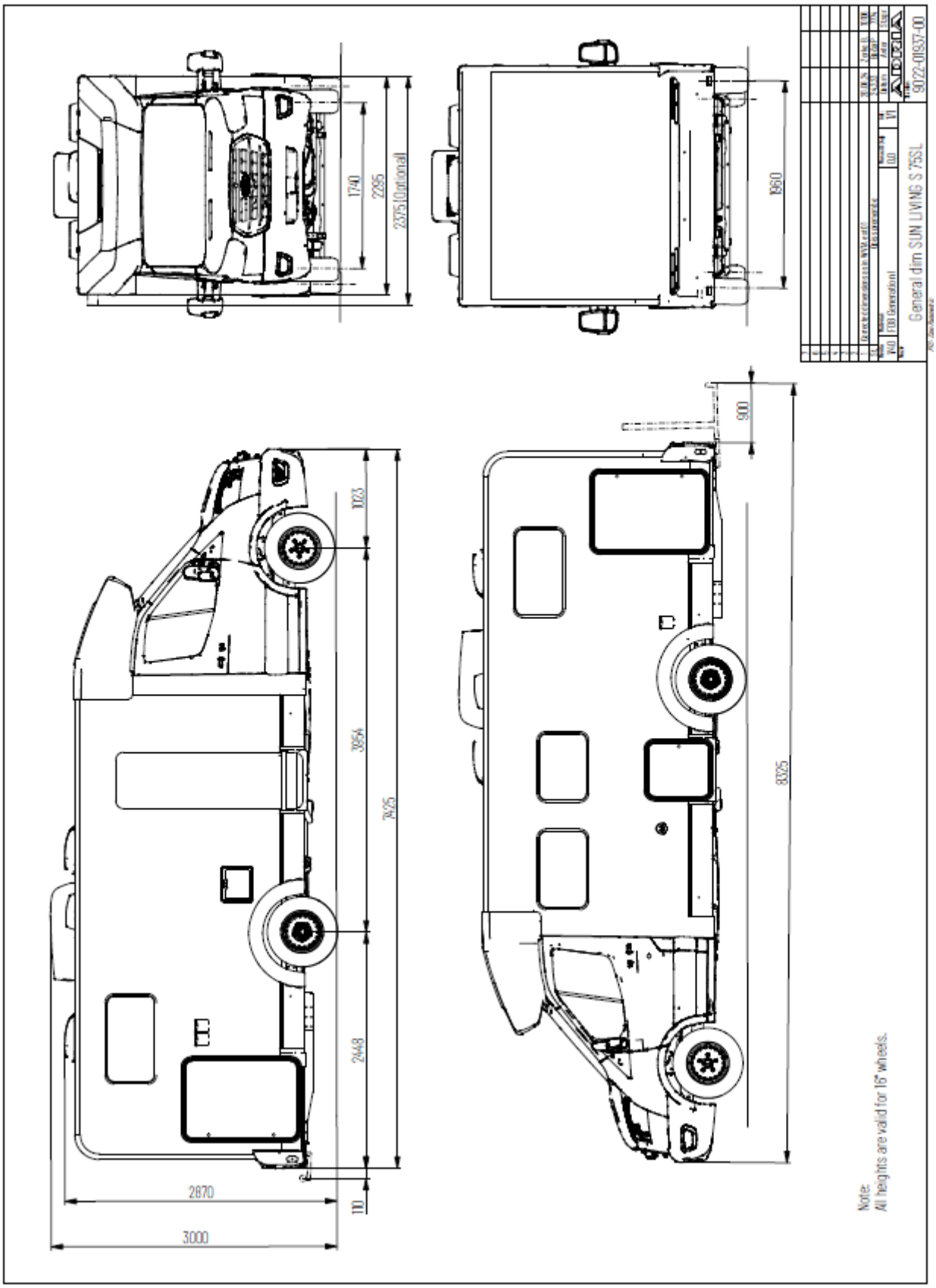
8. **FRENI**
BRAKES

8.1	Tipo e caratteristiche dei freni con uno schema dimensionale (ad esempio, tamburi o dischi, ruote frenate, trasmissione alle ruote frenate, marca e tipo degli insiemi di ganasce/pastiglie e/o guarnizioni, superfici efficaci di frenatura, raggio dei tamburi, ganasce o dischi, massa dei tamburi, dispositivi di regolazione, parti interessate dell'asse o degli assi e della sospensione, ecc.): *Type and characteristics of the brakes with a drawing, (e.g. drums or discs, wheels braked, connection to braked wheels, make and type of shoe/pad assemblies and/or linings, effective braking areas, radius of drums, shoes or discs, mass of drums, adjustment devices relevant parts of the axle(s) and suspension, etc.):*	Vedere Omologazione Europea 1° fase/ *See European Technical Approval 1st phase*
8.2	Curva di funzionamento, descrizione e/o disegno dei seguenti sistemi di frenatura con, ad esempio, i dispositivi di trasmissione e di comando (costruzione, regolazione, rapporti di leva, accessibilità del comando e sua posizione, comandi del nottolino di arresto nel caso di trasmissione meccanica, caratteristiche degli elementi principali della trasmissione, cilindri e pistoni di comando, cilindri del freno o componenti equivalenti nel caso di sistemi di frenatura elettrici): *Operating diagram, description and/or drawing of the following braking systems with e.g. transmission and control (construction, adjustment, lever ratios, accessibility of control and its position, ratchet controls in the case of mechanical transmission, characteristics of the main parts of the linkage, cylinders and control pistons, brake cylinders or equivalent components in the case of*	Vedere Omologazione Europea 1° fase/ *See European Technical Approval 1st phase*
8.2.1	Sistema di frenatura di servizio: *Service braking system:*	Vedere Omologazione Europea 1° fase/ *See European Technical Approval 1st phase*
8.2.3	Sistema di frenatura di stazionamento: *Parking braking system:*	Vedere Omologazione Europea 1° fase/ *See European Technical Approval 1st phase*
8.2.4	Eventuali sistemi di frenatura supplementari: *Any additional braking system:*	Non ricorre *Not applicable*
8.2.5	Sistema di frenatura di emergenza in caso di distacco accidentale del rimorchio: *Break-away braking system*	Non ricorre *Not applicable*

8.5.	Impianto frenante antibloccaggio: *Anti-lock braking system:*	sì / ~~no~~ / ~~facoltativo~~ yes / ~~no~~ / ~~optional~~
8.5.1	Per i veicoli muniti di sistemi di frenatura antibloccaggio, descrizione del funzionamento del sistema (compresi eventuali elementi elettronici), curva del bloccaggio elettrico e schema del circuito idraulico o pneumatico: *For vehicles with anti-lock braking systems, description of system operation (including any electronic parts), electric block diagram, hydraulic or pneumatic circuit plan:*	Vedere Omologazione Europea 1° fase/ *See European Technical Approval 1st phase*
8.6		Vedere Omologazione Europea 1° fase/ *See European Technical Approval 1st phase*
8.7	Descrizione e/o disegno del sistema di alimentazione di energia (da indicare anche nel caso dei sistemi di frenatura servoassistiti): *Description and/or drawing of the energy supply (also to be specified for power-assisted braking system):*	Non ricorre *Not applicable*
8.7.1	Nel caso di sistemi di frenatura ad aria compressa, la pressione di funzionamento p 2 nel o nei serbatoi: *In the case of compressed air braking systems, working pressure p 2 in the pressure reservoir(s):*	Non ricorre *Not applicable*
8.7.2	Nel caso di sistemi di frenatura a depressione, livello iniziale di energia nel o nei serbatoi: *In the case of vacuum braking systems, the initial energy level in the reservoir(s):*	Non ricorre *Not applicable*
8.8	Calcolo del sistema di frenatura: determinazione del rapporto tra la somma delle forze frenanti alla periferia delle ruote e le forze esercitate sul comando del freno: *Calculation of the braking system; determination of the ratio between the total braking forces at the circumference of the wheels and the force applied to the braking control:*	Vedere Omologazione Europea 1° fase/ *See European Technical Approval 1st phase*
8.9.	Breve descrizione dell'impianto frenante ai sensi del punto 1.6 dell'addendum all'appendice 1 dell'allegato IX della direttiva 71/320/CEE: *Brief description of the braking system according to point 1.6 of the Addendum to Appendix 1 of Annex IX to Directive 71/320/EEC:*	vedere p.ti 8.1, 8.2, e 8.5 *see points 8.1, 8.2, and 8.5*

8.10.	Se si chiede l'esenzione dalle prove di tipo I e/o II o III, indicare il numero del verbale ai sensi dell'appendice 2 dell'allegato VII della direttiva 71/320/CEE: *If claiming exemptions from the Type I and/or Type II or Type III tests, state the number of the report in accordance with Appendix 2 of Annex VII to Directive 71/320/EEC:*	Non ricorre *Not applicable*

COSTRUTTORE / *MANUFACTURER*	OMOLOGAZIONE CE DEI VEICOLI / *EC TYPE APPROVAL OF VEHICLES*	
	Scheda informativa *Information document*	n° 000-TFR1-00
	Data / *Date*	02/07/2025
TECNOCARAVAN di Damiani Viller srl INDIRIZZO / *ADDRESS* via Medicine, 1918 – 41057 S. Vito di Spilamberto - MODENA	Allegati foto / disegni / info. *Attached photos / drawings / info.*	All. n° 1.1-TFR1-00
	DISEGNI *DRAWINGS*	Pag. 1 / 10



COSTRUTTORE / *MANUFACTURER*	OMOLOGAZIONE CE DEI VEICOLI / *EC TYPE APPROVAL OF VEHICLES*	
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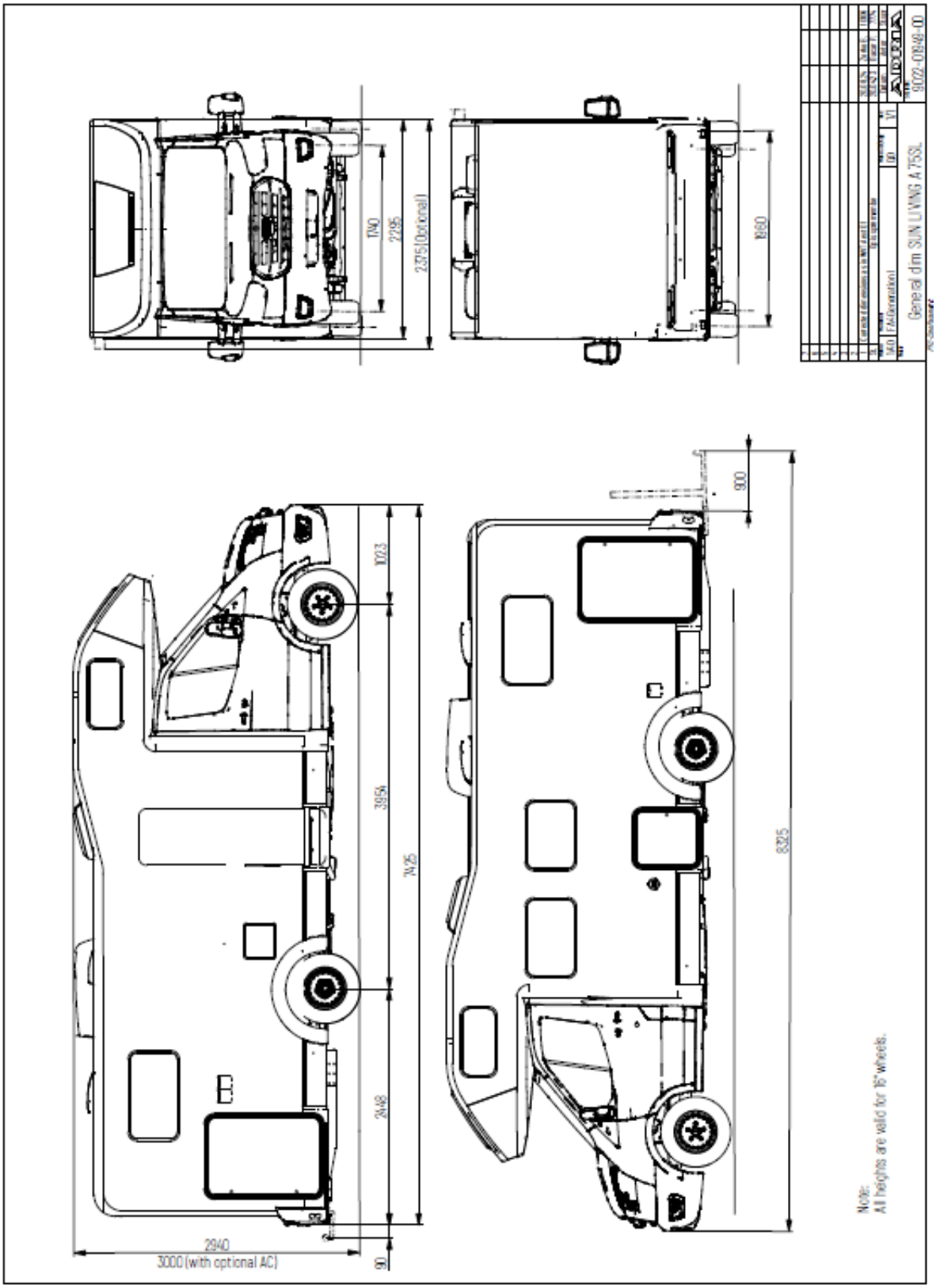
	DISEGNI *DRAWINGS*	Pag. 2 / 10



COSTRUTTORE / *MANUFACTURER*	OMOLOGAZIONE CE DEI VEICOLI / *EC TYPE APPROVAL OF VEHICLES*	
	Scheda informativa *Information document*	n° 000-TFR1-00
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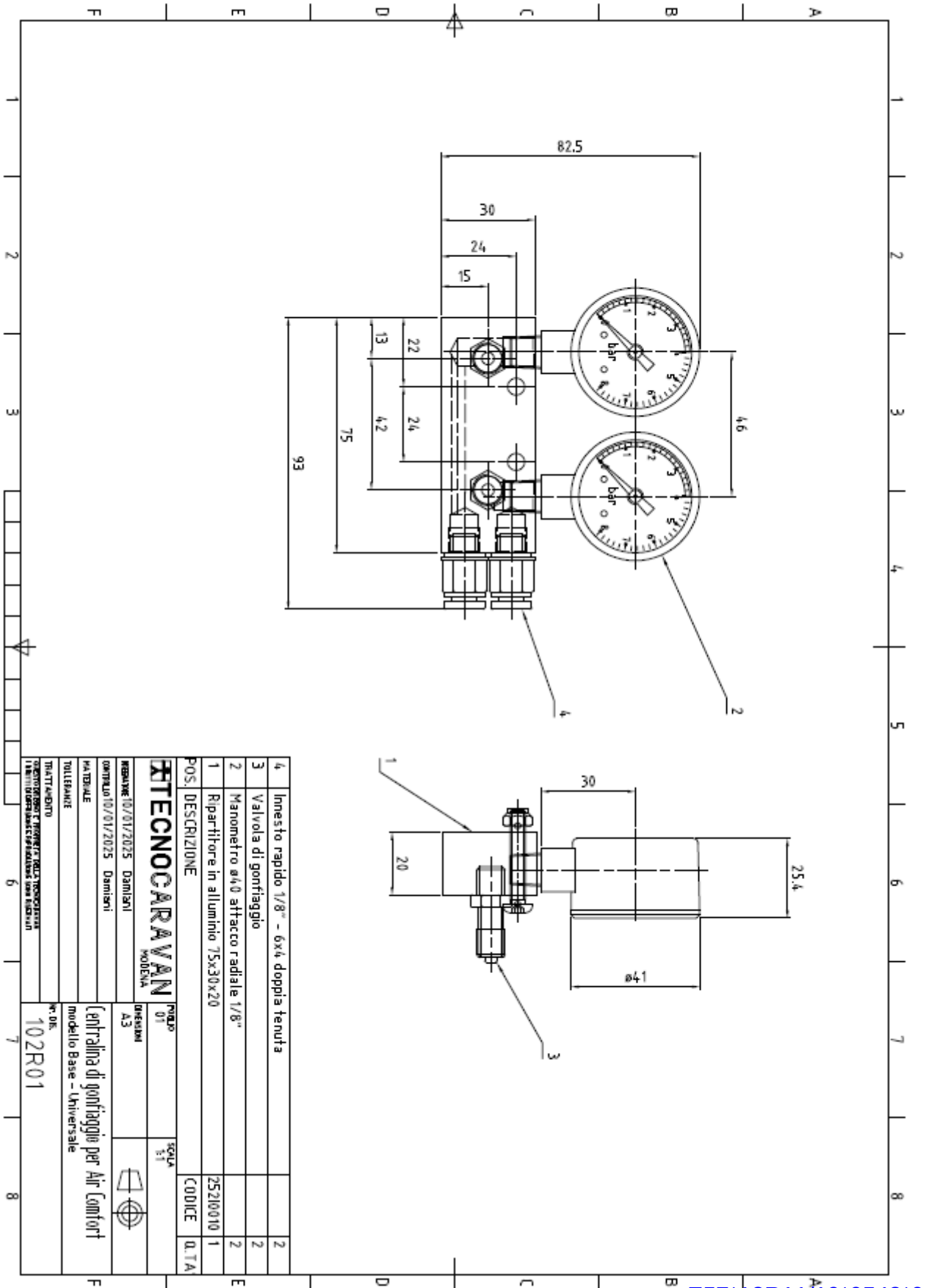
	DISEGNI *DRAWINGS*	Pag. 3 / 10



COSTRUTTORE / *MANUFACTURER*	OMOLOGAZIONE CE DEI VEICOLI / *EC TYPE APPROVAL OF VEHICLES*	
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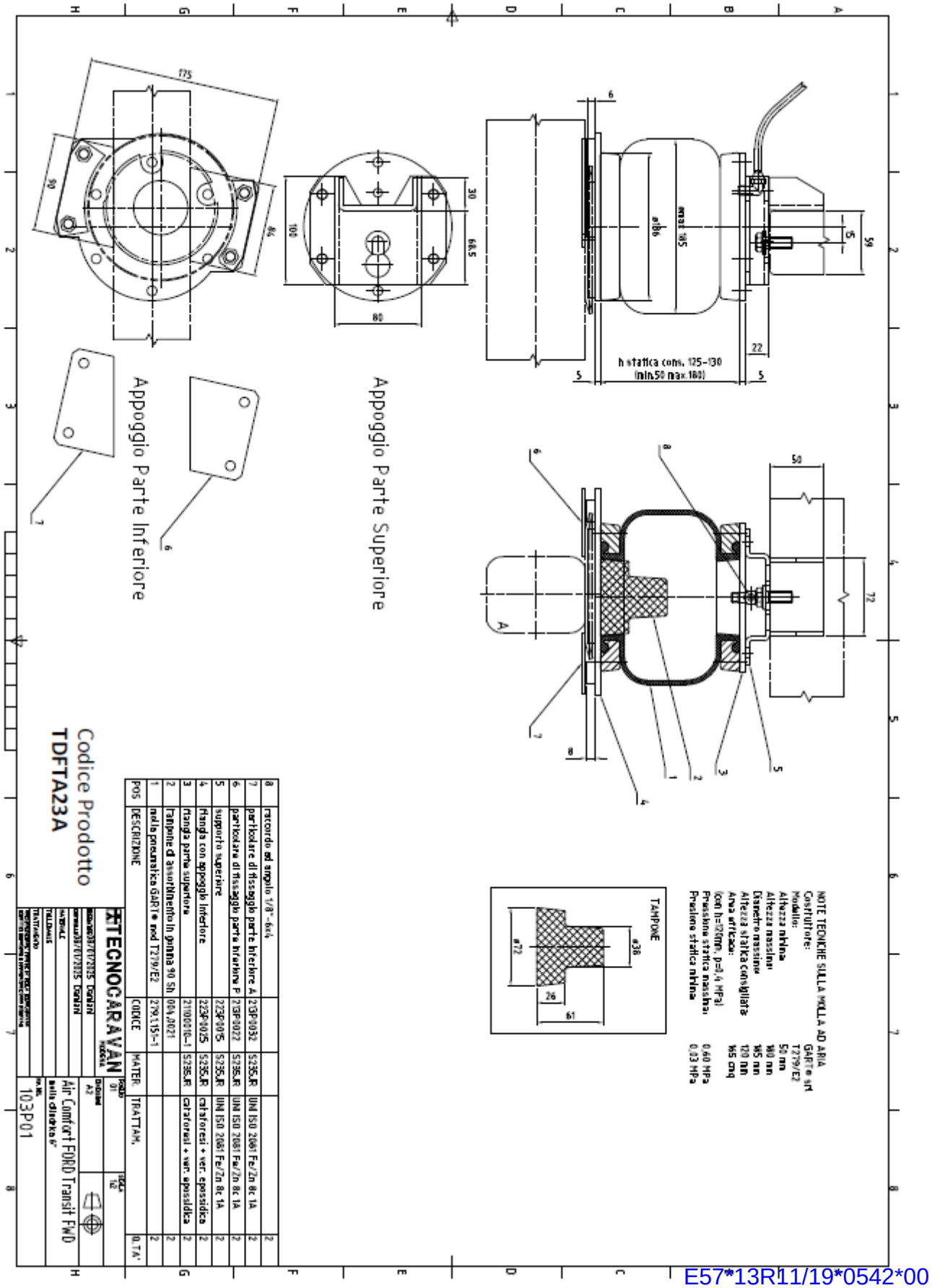

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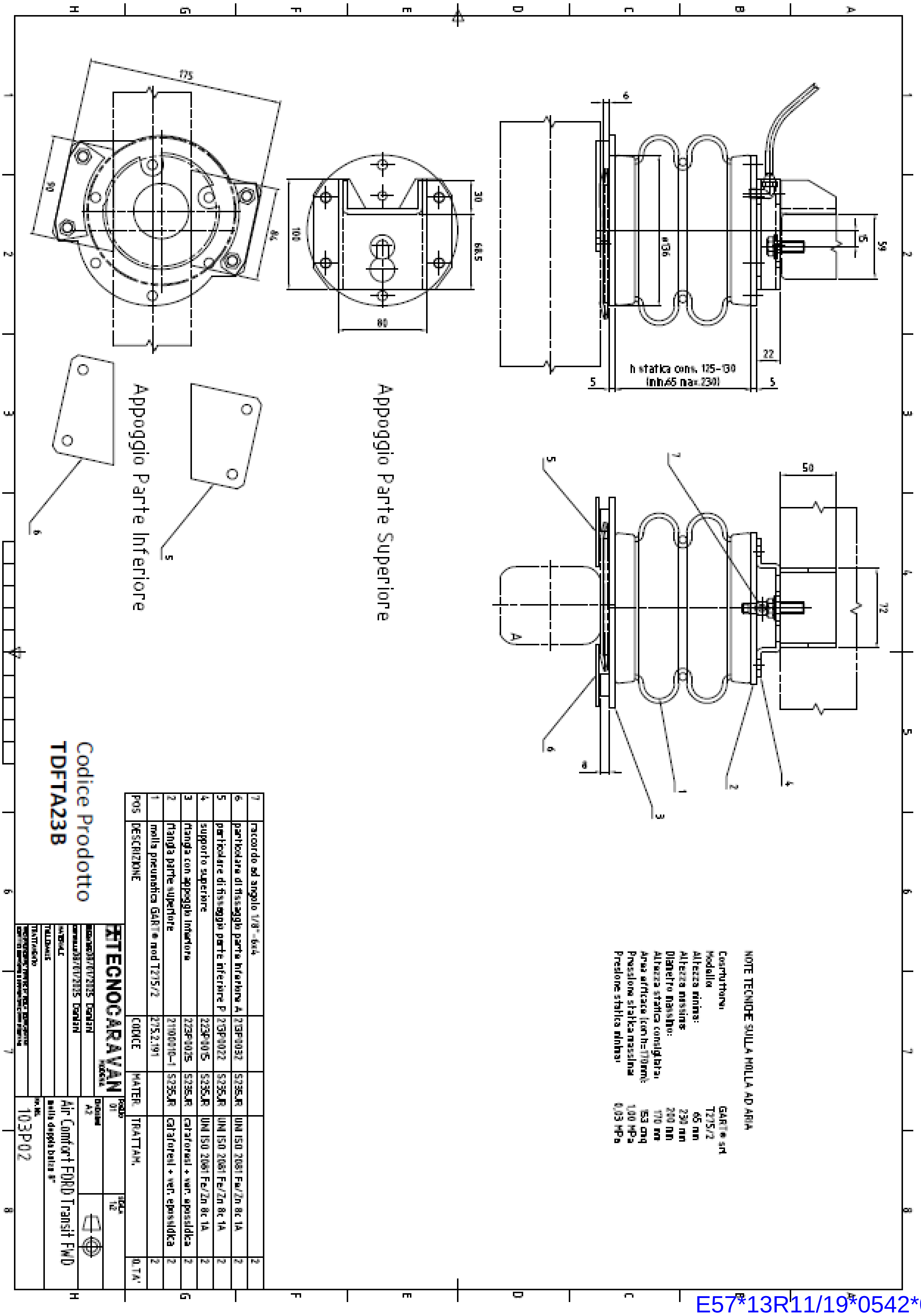
	DISEGNI *DRAWINGS*	Pag. 5 / 10



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COSTRUTTORE / *MANUFACTURER*	OMOLOGAZIONE CE DEI VEICOLI / *EC TYPE APPROVAL OF VEHICLES*	
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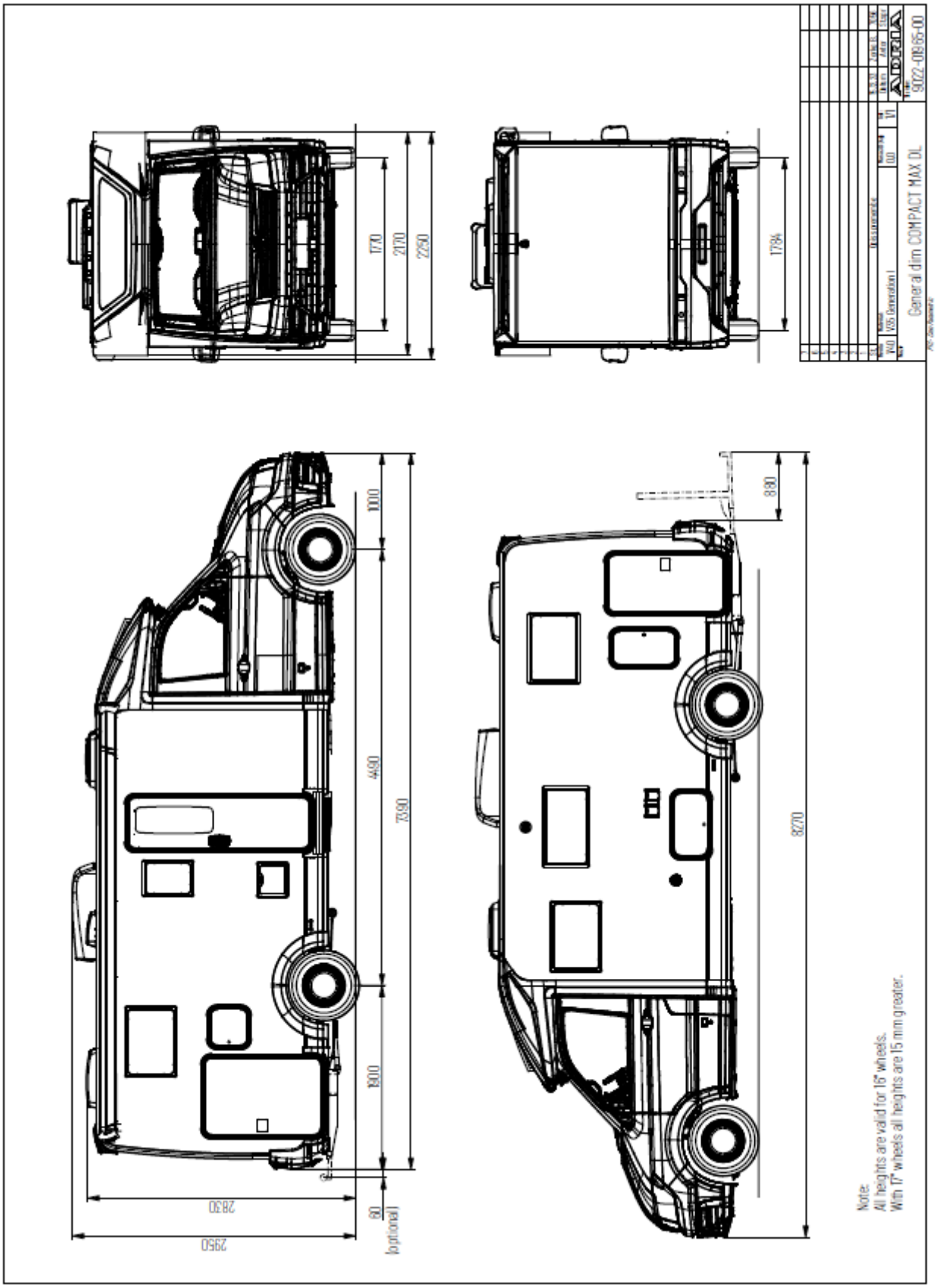
	DISEGNI *DRAWINGS*	Pag. 6 / 10



COSTRUTTORE / *MANUFACTURER*	OMOLOGAZIONE CE DEI VEICOLI / *EC TYPE APPROVAL OF VEHICLES*	
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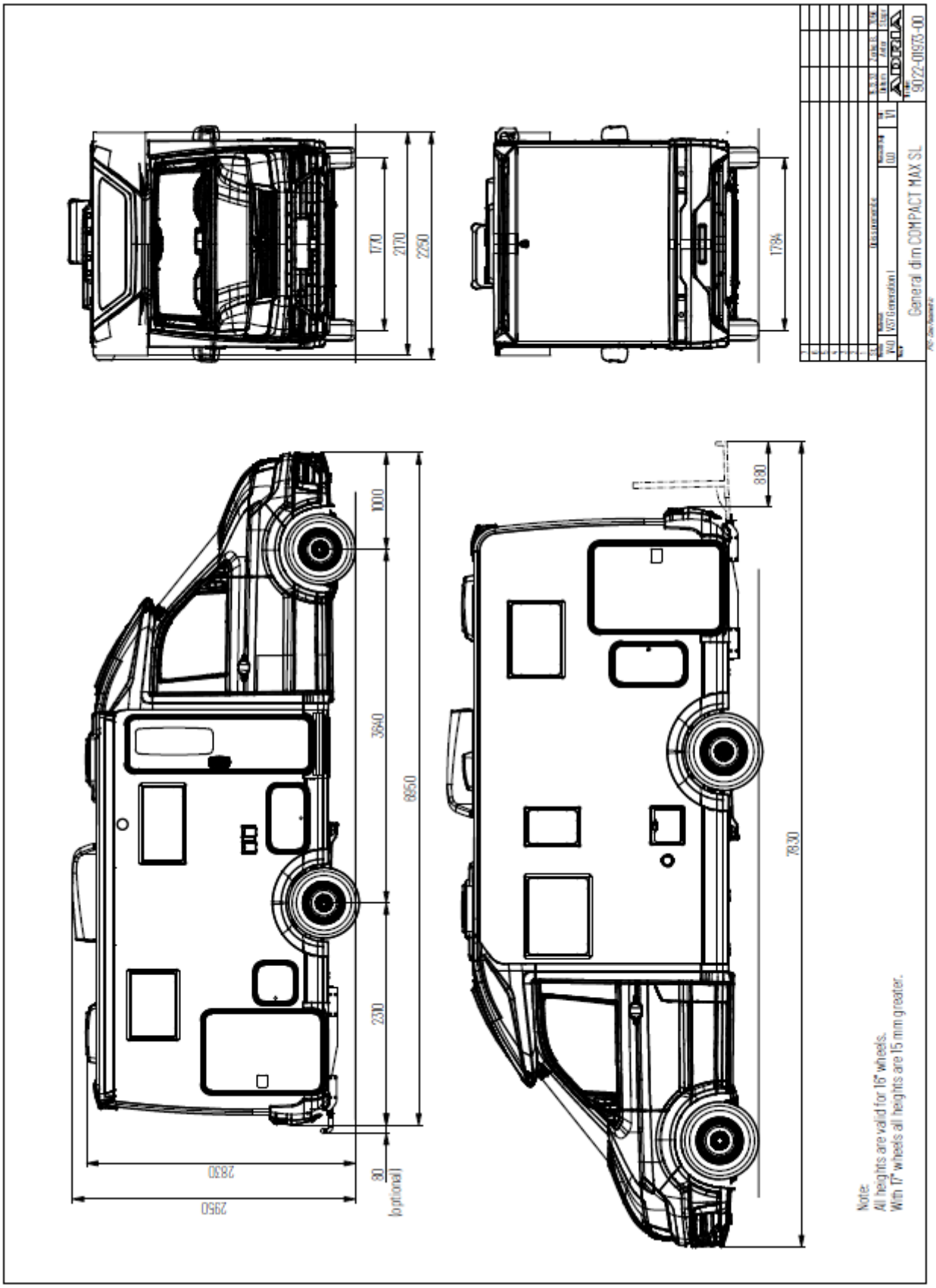

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COSTRUTTORE / *MANUFACTURER*	OMOLOGAZIONE CE DEI VEICOLI / *EC TYPE APPROVAL OF VEHICLES*	
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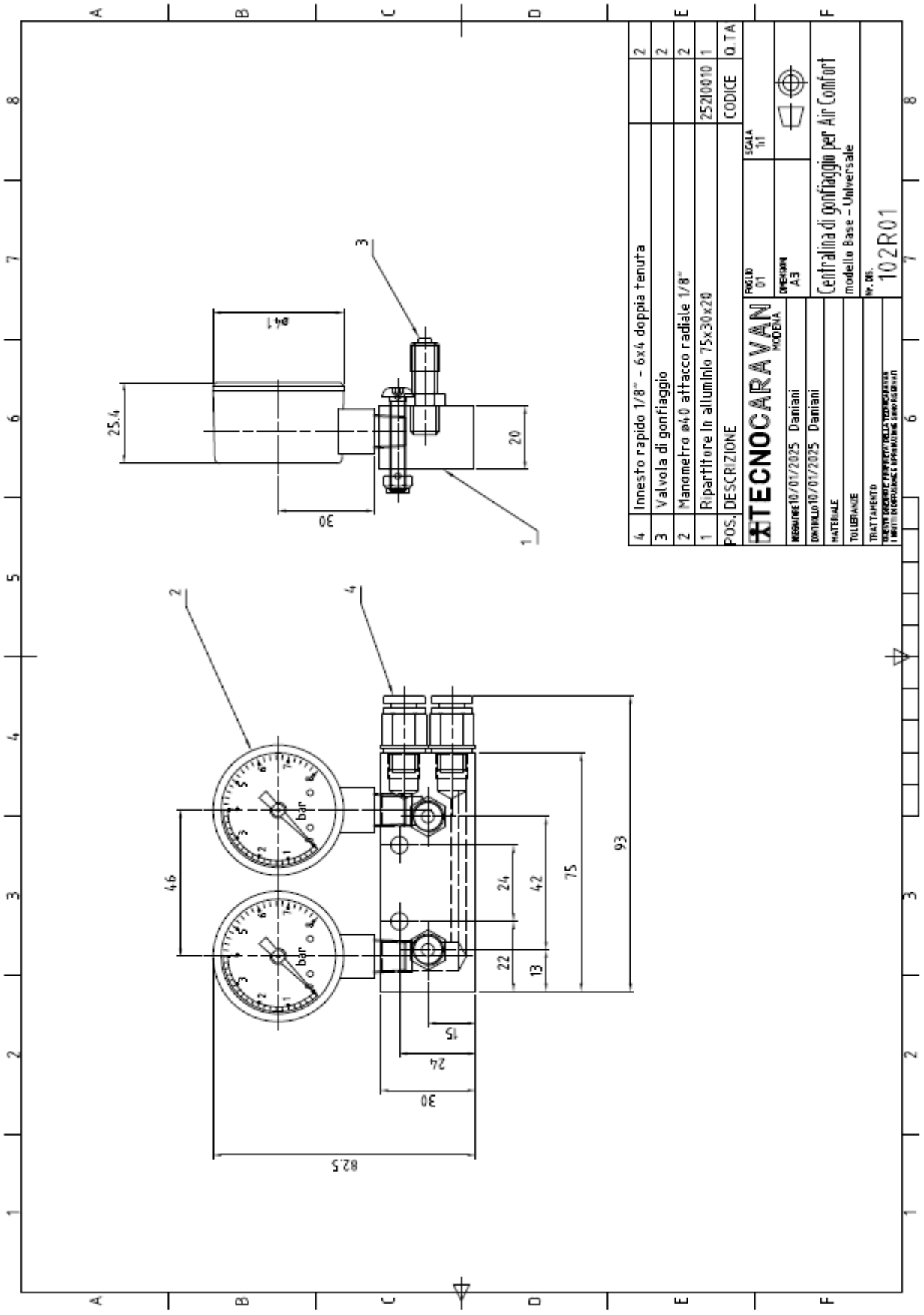

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COSTRUTTORE / *MANUFACTURER*	OMOLOGAZIONE CE DEI VEICOLI / *EC TYPE APPROVAL OF VEHICLES*	
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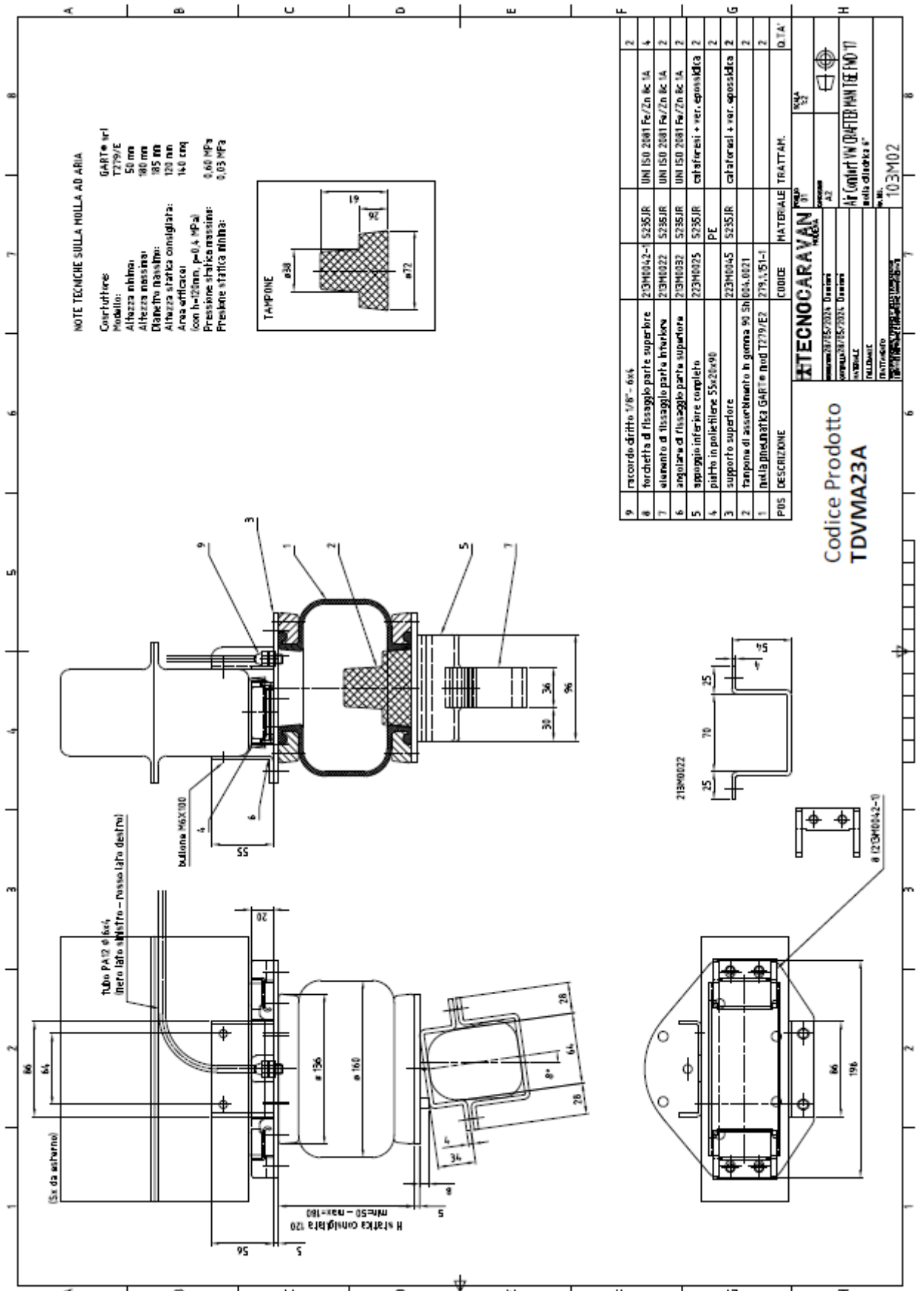

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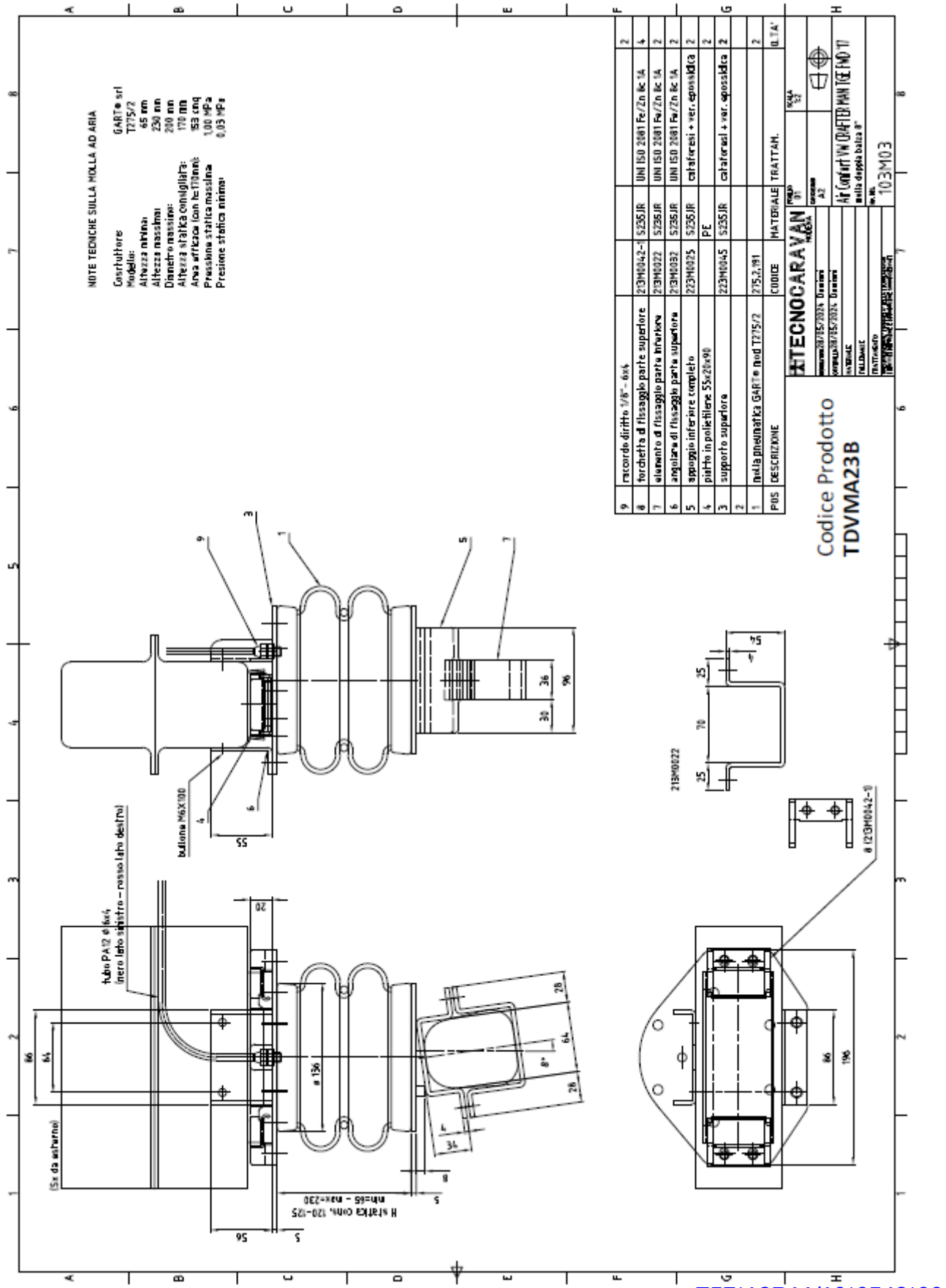
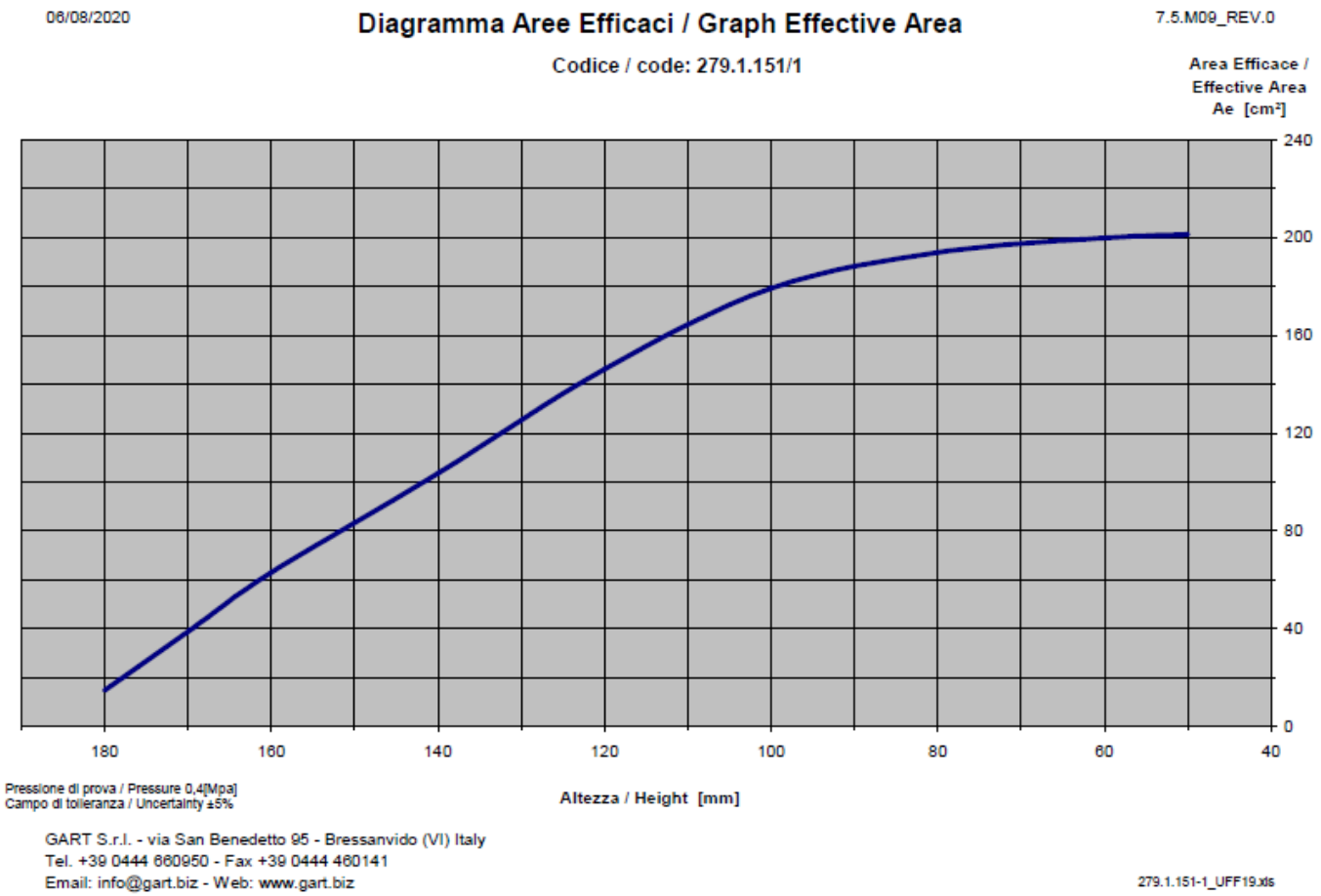


E57*13R11/19*0542*00

SOSPENSIONI
SUSPENSION

Molla pneumatica 6-inch
6-inch air spring



GART Air Springs

Molla ad Aria *Air Spring* **T279/E2** — **Codice** *Code* **279.1.151/1**

Data Aggiornamento: 15/10/2019

DIMENSIONI	*DIMENSIONS*		
Ø max Corsa totale Altezza minima Altezza massima	*Maximum Ø* *Totale stroke* *Minimum height* *Maximum height*	[mm]	205 130 50 180
Peso	*Weight*	[daN]	0,97
Temperatura massima Temperatura minima	*Maximum temperature* *Minimum temperature*	[°C]	55(70) -35

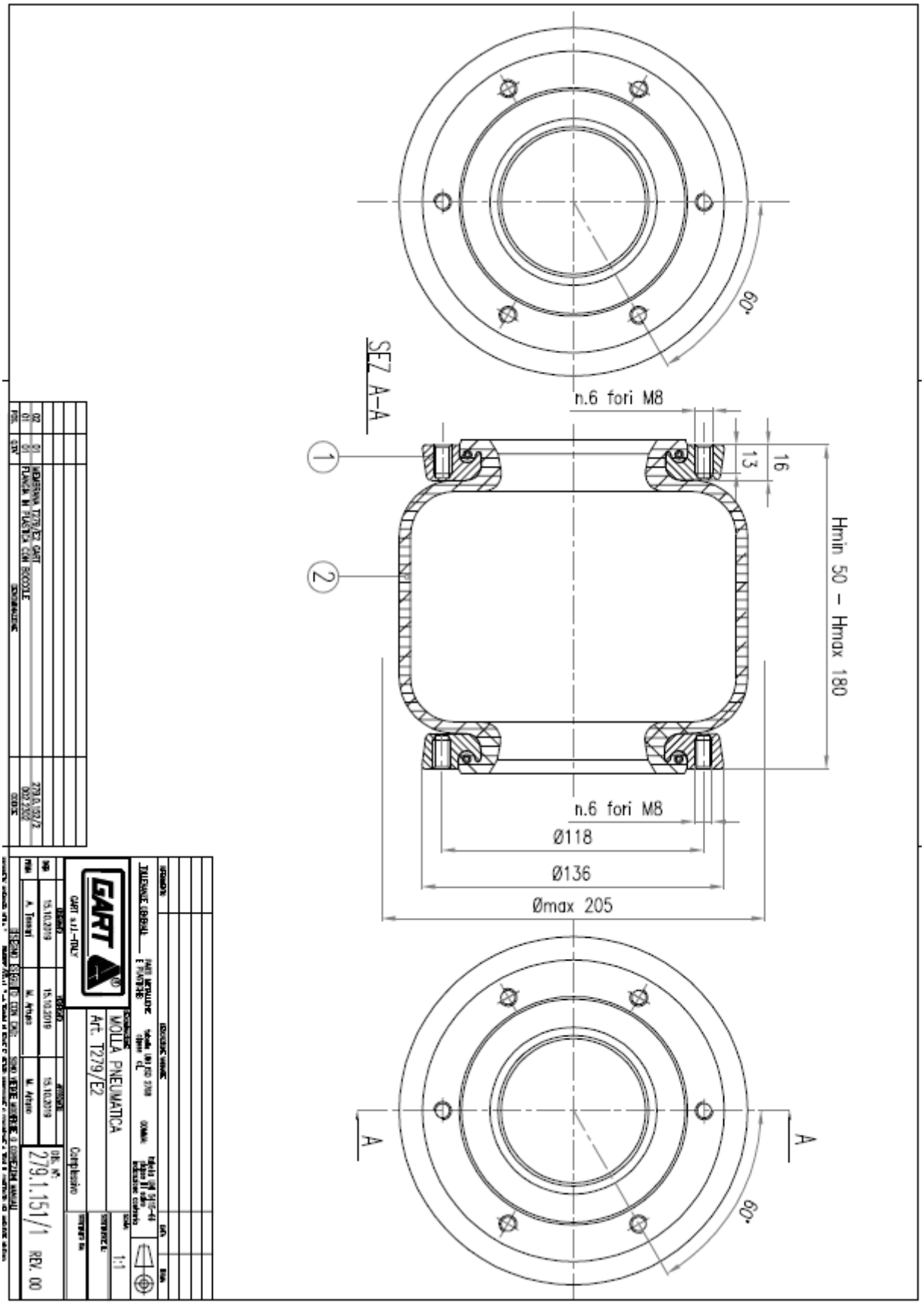
USO COME SOSPENSIONE	*APPLIED AS SUSPENSION*		
Altezza statica consigliata	*Design static height*	[mm]	120
Area efficace(*)	*Effective area(*)*	[cm²]	146
Carico statico alla pressione massima(*)	*Static load at maximum static pressure(*)*	[daN]	876
Pressione statica massima Pressione statica minima	*Maximum static pressure* *Minimum static pressure*	[MPa]	0,60 0,03

USO COME ATTUATORE	*APPLIED AS ACTUATOR*		
Pressione massima di esercizio Pressione minima di esercizio	*Maximum operating pressure* *Minimum operating pressure*	[MPa]	0,80 0,03

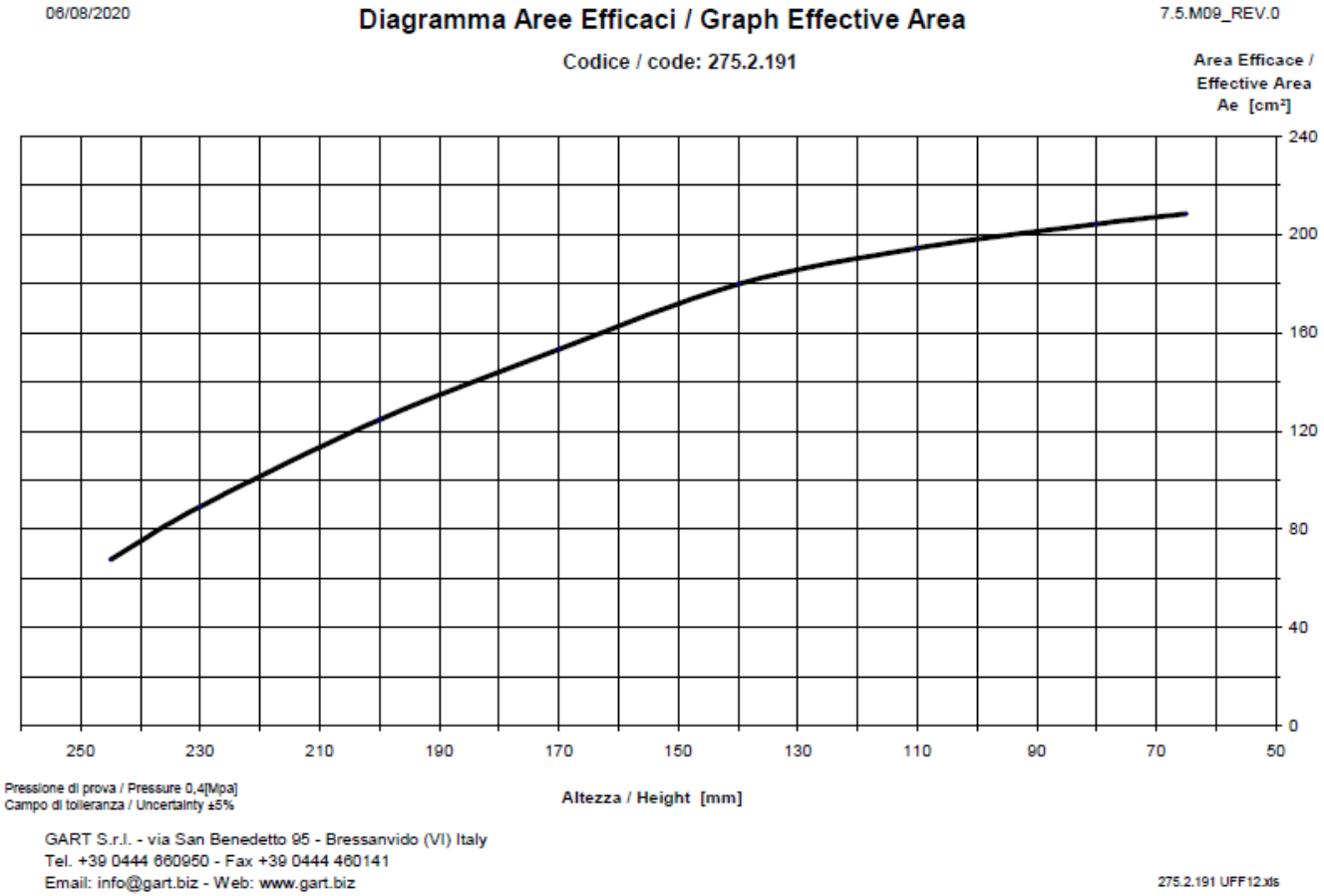
Altezza *Height*	Carico Statico - *Load Static* [d a N]						
	Pressione - *Pressure* [MPa]					Pmax S	Pmax A
[mm]	0,3	0,4	0,5	0,6	0,7	0,60	0,80
50	603	804	1005	1206	1407	1206	1608
120	438	584	730	876	1022	876	1168
180	45	60	75	90	105	90	120

(*) Dati riferiti all'altezza statica consigliata

(*) *Data concerning the design static height position*


SEZ A-A
n.6 fori M8
16
13
Hmin 50 – Hmax 180
n.6 fori M8
Ø118
Ø136
Ømax 205
60°
60°
A
A
1
2
GART
MOLLA PNEUMATICA
Art. T279/E2
279.1.151/1 REV. 00
1:1

Molla pneumatica 8-inch
8-inch air spring



GART Air Springs

Molla ad Aria *Air Spring* **T275/2** — **Codice** *Code* **275.2.191**

Data Aggiornamento: 28/12/2012

DIMENSIONI	*DIMENSIONS*		
Ø max Corsa totale Altezza minima Altezza massima	*Maximum Ø* *Totale stroke* *Minimum height* *Maximum height*	[mm]	200 180 65 245
Peso	*Weight*	[daN]	1,17
Temperatura massima Temperatura minima	*Maximum temperature* *Minimum temperature*	[°C]	55(70) -35

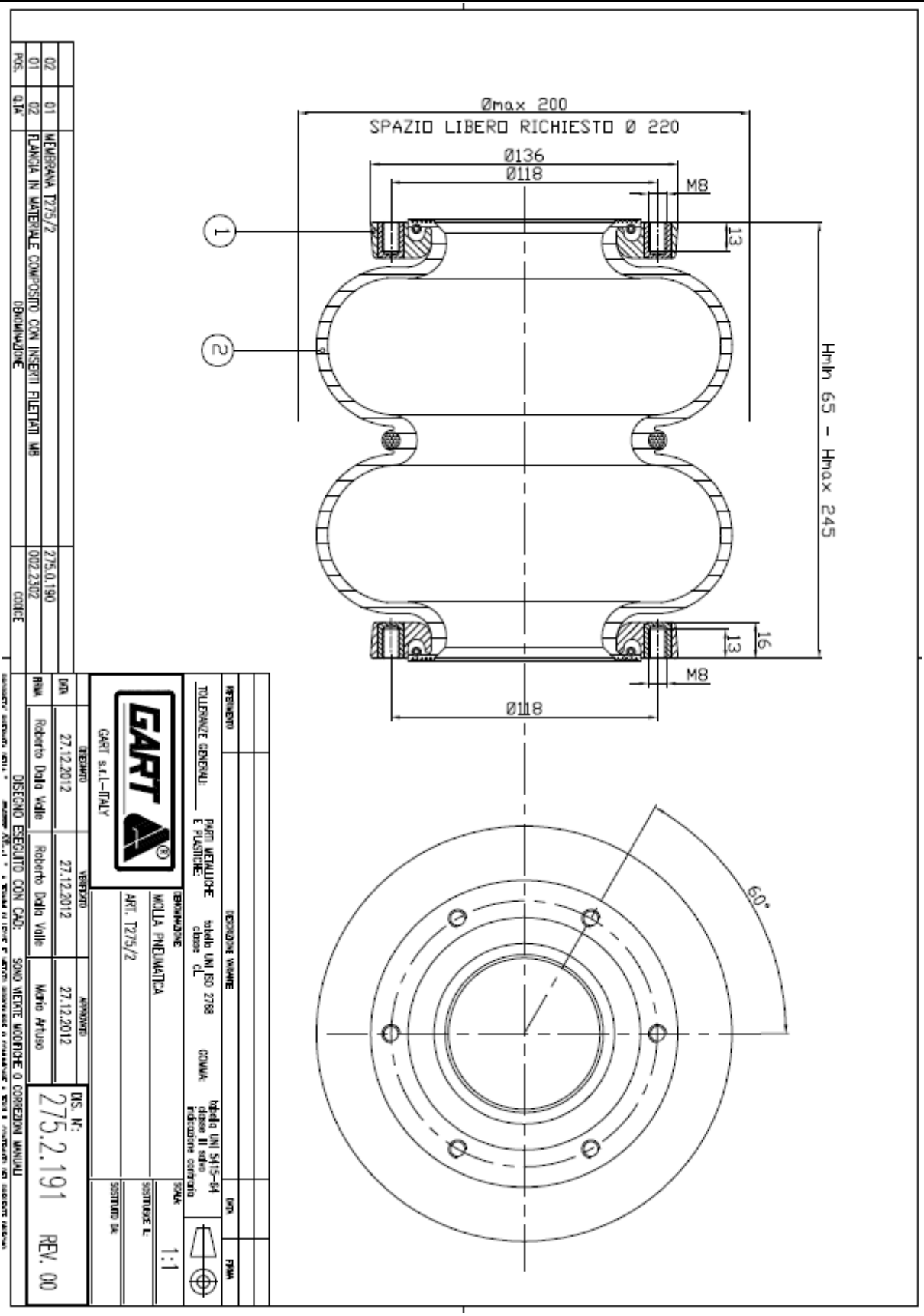
USO COME SOSPENSIONE	*APPLIED AS SUSPENSION*		
Altezza statica consigliata	*Design static height*	[mm]	170
Area efficace(*)	*Effective area(*)*	[cm²]	153
Carico statico alla pressione massima(*)	*Static load at maximum static pressure(*)*	[daN]	1071
Pressione statica massima Pressione statica minima	*Maximum static pressure* *Minimum static pressure*	[MPa]	0,70 0,03

USO COME ATTUATORE	*APPLIED AS ACTUATOR*		
Pressione massima di esercizio Pressione minima di esercizio	*Maximum operating pressure* *Minimum operating pressure*	[MPa]	0,80 0,03

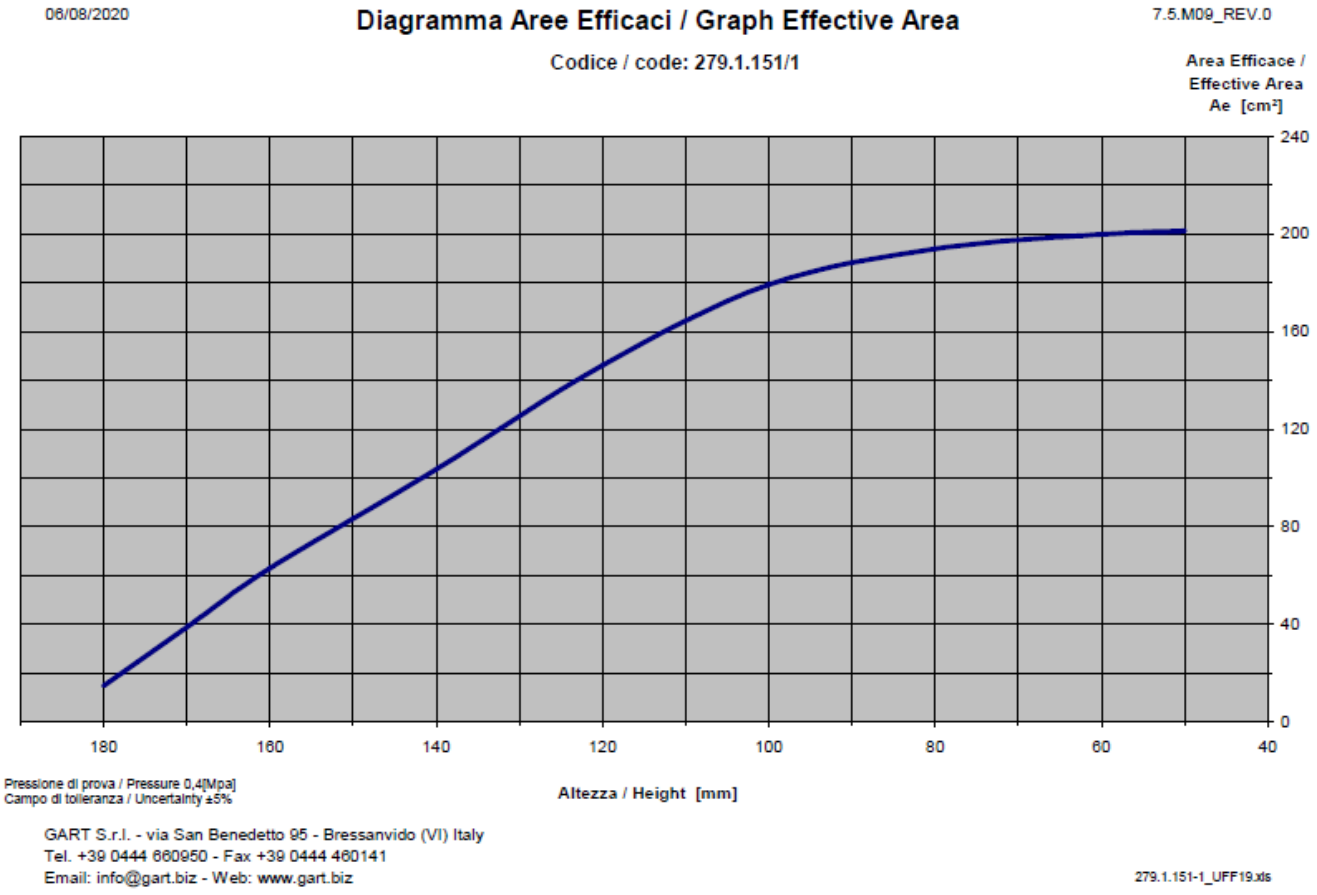
Altezza *Height*	Carico Statico - *Load Static* [d a N]						
	Pressione - *Pressure* [MPa]					Pmax S	Pmax A
[mm]	0,3	0,4	0,5	0,6	0,7	0,70	0,80
65	624	832	1040	1248	1456	1456	1664
170	459	612	765	918	1071	1071	1224
245	204	272	340	408	476	476	544

(*) Dati riferiti all'altezza statica consigliata

(*) *Data concerning the design static height position*


Ømax 200
SPAZIO LIBERO RICHIESTO Ø 220
Ø136
Ø118
M8
13
Hmin 65 - Hmax 245
16
Ø118
60°
02 01 MEMBRANA T275/2
01 02 FLANGIA IN MATERIALE COMPOSITO CON INSERTI FILETTATI M8
POS. Q.TA' DENOMINAZIONE
275.0.190
002.2302
CODICE
GART
GART s.r.l.-ITALY
MOLLA PNEUMATICA
ART. T275/2
DIS. N°: 275.2.191 REV. 00
DISEGNO ESEGUITO CON CAD: SONO VIETATE MODIFICHE O CORREZIONI MANUALI
SCALA 1:1
Roberto Dalla Valle 27.12.2012
Roberto Dalla Valle 27.12.2012
Mario Artuso 27.12.2012

Molla pneumatica 6-inch
6-inch air spring



GART Air Springs

Molla ad Aria *Air Spring* **T279/E2** — **Codice** *Code* **279.1.151/1**

Data Aggiornamento: 15/10/2019

DIMENSIONI / *DIMENSIONS*

Ø max	*Maximum Ø*	[mm]	205
Corsa totale	*Totale stroke*		130
Altezza minima	*Minimum height*		50
Altezza massima	*Maximum height*		180
Peso	*Weight*	[daN]	0,97
Temperatura massima	*Maximum temperature*	[°C]	55(70)
Temperatura minima	*Minimum temperature*		-35

USO COME SOSPENSIONE / *APPLIED AS SUSPENSION*

Altezza statica consigliata	*Design static height*	[mm]	120
Area efficace(*)	*Effective area(*)*	[cm²]	146
Carico statico alla pressione massima(*)	*Static load at maximum static pressure(*)*	[daN]	876
Pressione statica massima	*Maximum static pressure*	[MPa]	0,60
Pressione statica minima	*Minimum static pressure*		0,03

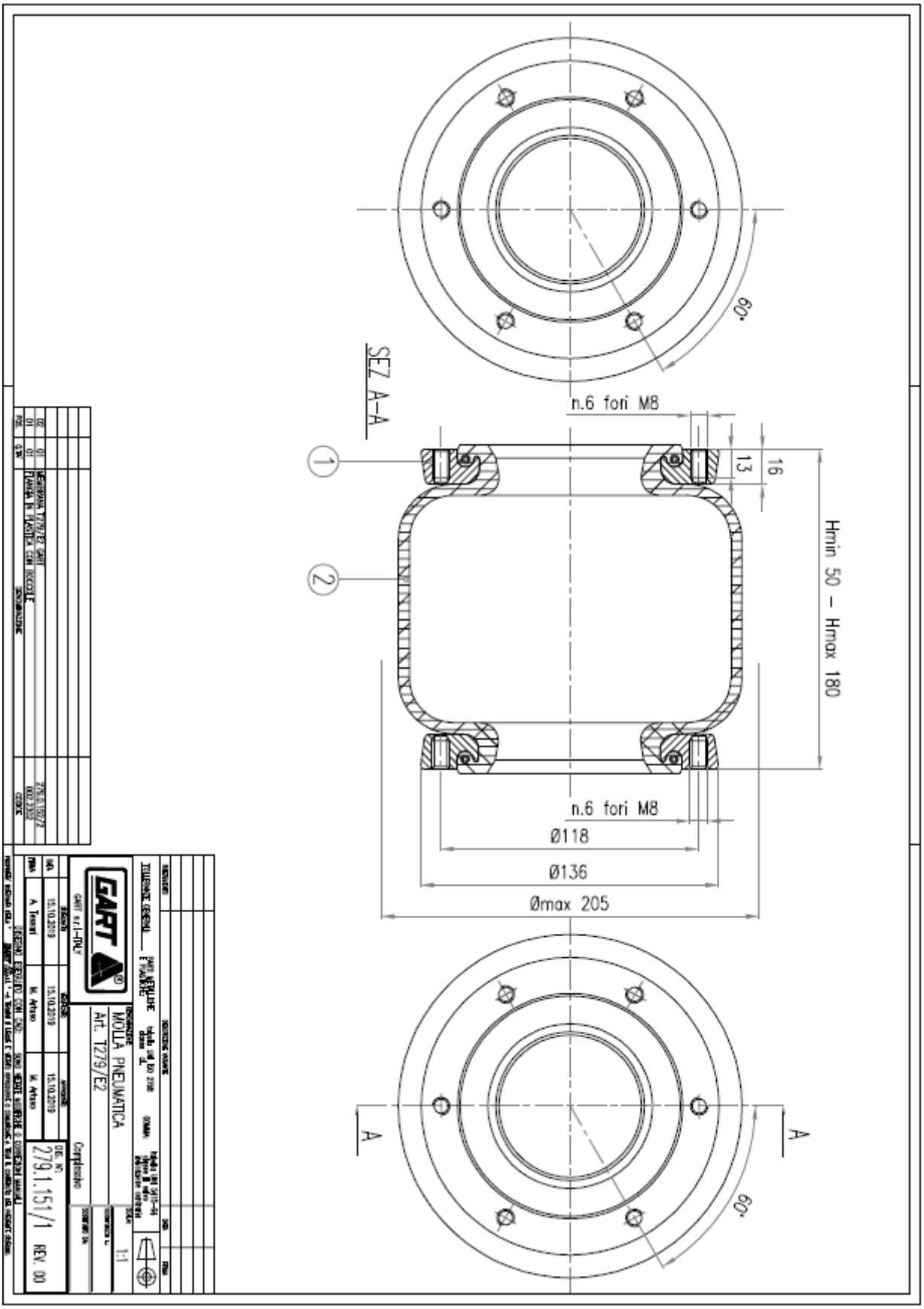
USO COME ATTUATORE / *APPLIED AS ACTUATOR*

Pressione massima di esercizio	*Maximum operating pressure*	[MPa]	0,80
Pressione minima di esercizio	*Minimum operating pressure*		0,03

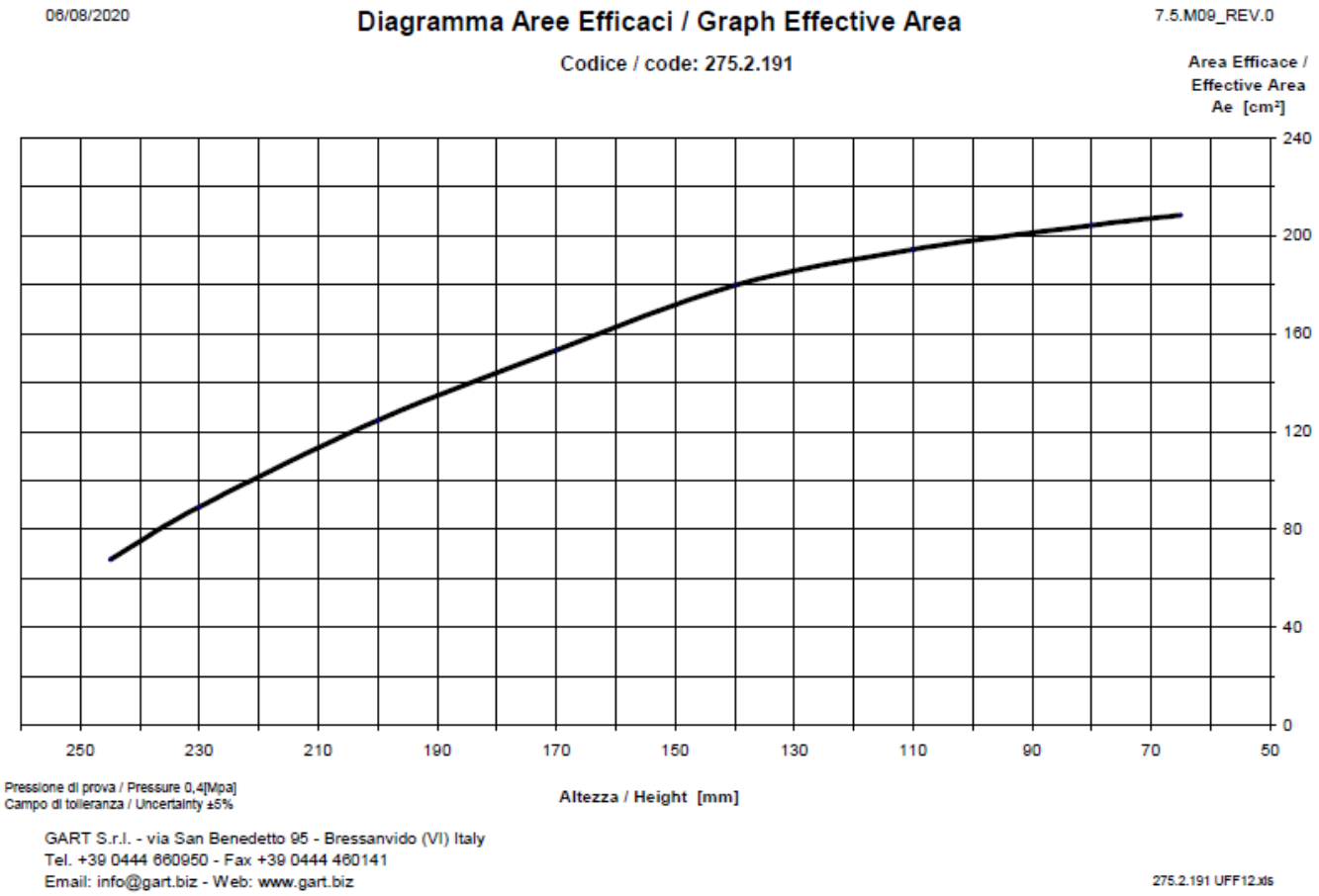
Altezza *Height*	Carico Statico - *Load Static* [d a N]						
	Pressione - *Pressure* [MPa]					Pmax S	Pmax A
[mm]	0,3	0,4	0,5	0,6	0,7	0,60	0,80
50	603	804	1005	1206	1407	1206	1608
120	438	584	730	876	1022	876	1168
180	45	60	75	90	105	90	120

(*) Dati riferiti all'altezza statica consigliata

(*) *Data concerning the design static height position*


SEZ A-A
n.6 fori M8
13
16
Hmin 50 – Hmax 180
n.6 fori M8
Ø118
Ø136
Ømax 205
60°
A
A
MOLLA PNEUMATICA
Art. T279/E2
279.1.151/1 REV. 00

Molla pneumatica 8-inch
8-inch air spring



GART Air Springs

Molla ad Aria *Air Spring* **T275/2** — **Codice** *Code* **275.2.191**

Data Aggiornamento: 28/12/2012

DIMENSIONI	*DIMENSIONS*		
Ø max Corsa totale Altezza minima Altezza massima	*Maximum Ø* *Totale stroke* *Minimum height* *Maximum height*	[mm]	200 180 65 245
Peso	*Weight*	[daN]	1,17
Temperatura massima Temperatura minima	*Maximum temperature* *Minimum temperature*	[°C]	55(70) -35

USO COME SOSPENSIONE	*APPLIED AS SUSPENSION*		
Altezza statica consigliata	*Design static height*	[mm]	170
Area efficace(*)	*Effective area(*)*	[cm²]	153
Carico statico alla pressione massima(*)	*Static load at maximum static pressure(*)*	[daN]	1071
Pressione statica massima Pressione statica minima	*Maximum static pressure* *Minimum static pressure*	[MPa]	0,70 0,03

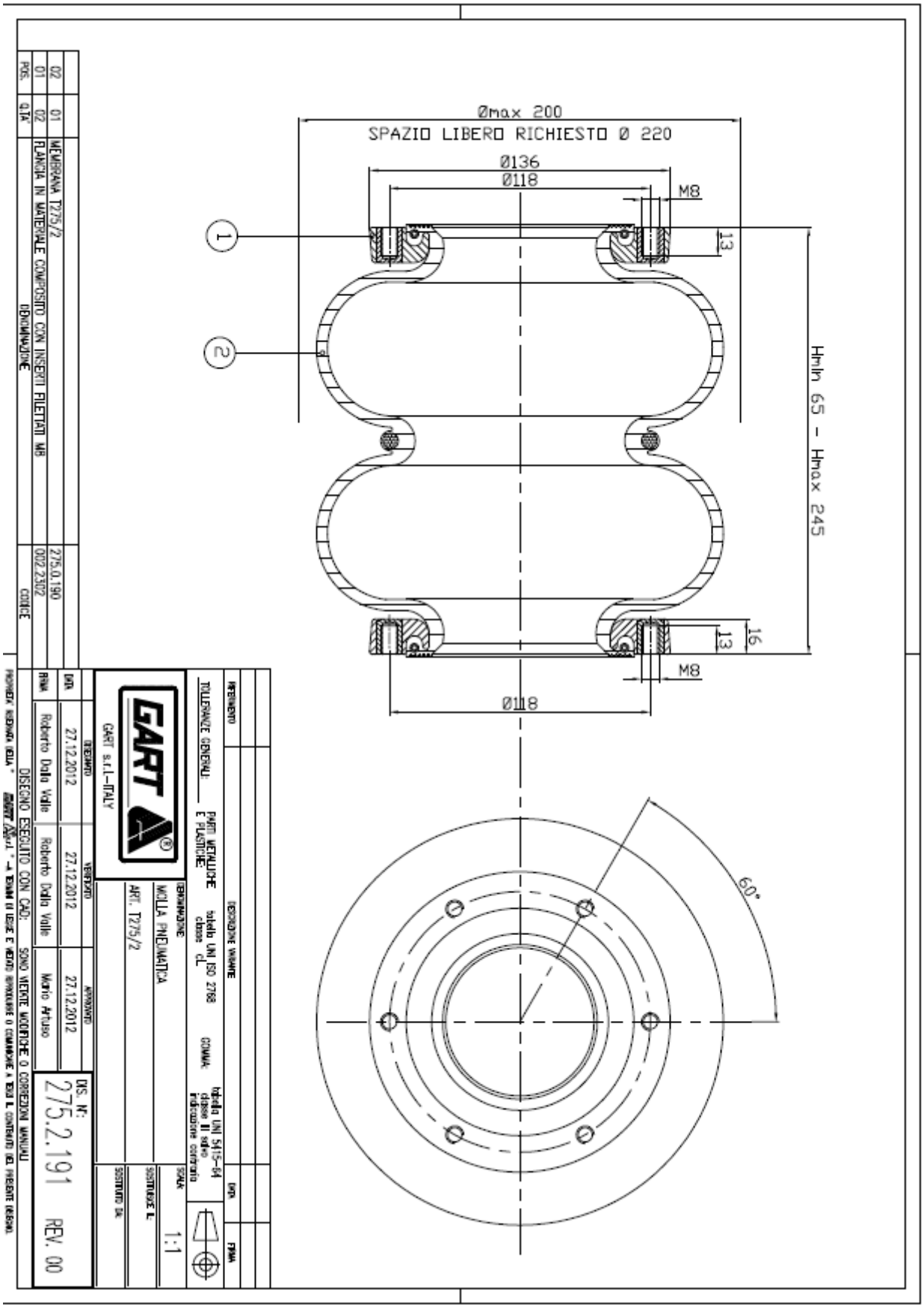
USO COME ATTUATORE	*APPLIED AS ACTUATOR*		
Pressione massima di esercizio Pressione minima di esercizio	*Maximum operating pressure* *Minimum operating pressure*	[MPa]	0,80 0,03

Altezza *Height*	Carico Statico - *Load Static* [d a N]						
	Pressione - *Pressure* [MPa]					Pmax S	Pmax A
[mm]	0,3	0,4	0,5	0,6	0,7	0,70	0,80
65	624	832	1040	1248	1456	1456	1664
170	459	612	765	918	1071	1071	1224
245	204	272	340	408	476	476	544

(*) Dati riferiti all'altezza statica consigliata

(*) *Data concerning the design static height position*

COSTRUTTORE / *MANUFACTURER*	OMOLOGAZIONE CE DEI VEICOLI / *EC TYPE APPROVAL OF VEHICLES*	
	Scheda informativa *Information document*	n° 000-TFR1-00
	Data / *Date*	02/07/2025
TECNOCARAVAN di Damiani Viller srl INDIRIZZO / *ADDRESS* via Medicine, 1918 – 41057 S. Vito di Spilamberto - MODENA	Allegati foto / disegni / info. *Attached photos / drawings / info.*	All. n° 6.0- TFR1-00
	SOSPENSIONI *SUSPENSION*	Pag. 12 / 12

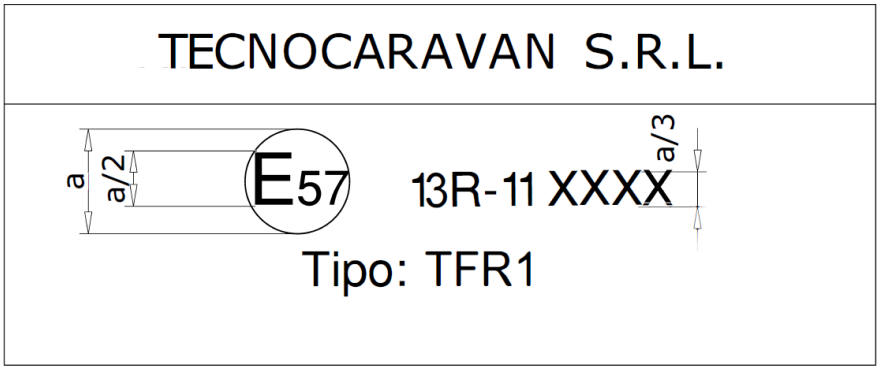


E57*13R11/19*0542*00

COSTRUTTORE / *MANUFACTURER*	OMOLOGAZIONE CE DEI VEICOLI / *EC TYPE APPROVAL OF VEHICLES*	
	Scheda informativa *Information document*	n° 000-TFR1-00
	Data / *Date*	02/07/2025
TECNOCARAVAN di Damiani Viller srl INDIRIZZO / *ADDRESS* via Medicine, 1918 – 41057 S. Vito di Spilamberto - MODENA	Allegati foto / disegni / info. *Attached photos / drawings / info.*	All. n° 9.0- TFR1-00
	TARGHETTA DEL COSTRUTTORE *MANUFACTURER'S PLATE*	Pag. 1 / 1

TARGHETTA DEL COSTRUTTORE – FAC SIMILE
MANUFACTURER'S PLATE – FAC SIMILE

Targhetta applicata sul montante destro della cabina vicina alla targhetta di Fase 1
Plate applied on the right hand side body panel under door striker *near the plate of Phase 1*



A= 8 mm min